ETC.

A REVIEW OF GENERAL SEMANTICS

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In Volume XIII, Number 1:

Suggestions on how to attend a conference are given by S. I. HAYAKAWA.

RAY L. BIRDWHISTELL explains the new science of Kinesics.

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The relation between words and things is reconsidered by ELEAZER LECKY.

Toward a Science of Man? ANATOL RAPOPORT describes the implications of the new behavioral sciences.

Articles and discussion by WENDELL JOHNSON, WILLIAM HANSON, C. G. BROWNE, MAURICE A. CRANE.

etc. etc.

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ETC.: A REVIEW OF GENERAL SEMANTICS

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THERE MIGHT ONCE HAVE BEEN A WISE OLD FRENCHMAN . . .*

WENDELL JOHNSON

THERE might once have been a wise old Frenchman who knew a most wonderful secret, which he longed to share with all who would but linger. To each of them he explained his secret with the patience and the vision of the olden prophets, and they, as one, exclaimed, "What rare poetic gifts you have!" The music of his words was to all of them enchanting, but the words of his music were as wind in the wheat.

The wonderful secret which the wise old Frenchman sought with unshrinking hope to share with all men, his brothers, was this: Only those who are wise to the words are the wise to whom words are sufficient.

With the concentration of a midwife he strove to make this plain to those who listened. With the gentleness of a new mother he abided their illusions of understanding by which unknowingly they kept themselves from comprehending his profound but simple meaning.

Deeply he divined that, talking to themselves unceasingly, men spin without end a net of words by which their thoughts, indeed their destinies, are stayed. Men think with words, but seldom long about the words with which they think —like fish to whom the waters of the sea are incidental to the sea.

YET, there were the children, not yet numbed by learning. As he sat one day on a firm chair beneath a wide tree on his green yard, the wise old Frenchman beckoned to a boy who had come near.

"What would you call this?" he asked the boy.

"A hickory nut," the boy said.

"Ah, but I should rather call it a pon lomando, because it seems to me to be a much prettier name. Don't you think it is a much prettier name?"

"Much prettier," said the boy.

"Good! Then you and I shall call it a pon lomando," said the wise old Frenchman.

"I'd like that. Pretty names are much the best."

"You know what names are for, don't you, boy?"

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* This is the opening chapter of Wendell Johnson's new book, *Your Most Enchanted Listener*, scheduled for publication by Harper & Bros. in February, 1956, and printed by permission of the publisher.

"Of course I do," said the boy. "I use them for talking."

"Ah! They're good for that."

The boy laughed softly.

"And have you noticed how very difficult it is to make names without talking with them, at any rate to yourself?"

"Of course I have," said the boy.

"And making names is great fun, don't you think?"

"Nothing is more fun than that," the boy said. "I can make a name for anything."

"And change it any time you please."

"Any time I please."

"Do you make new names because you grow tired of the old ones?"

"Sometimes I grow tired of the old ones," the boy said.

"Is it that you grow tired of them when they are no longer useful for making thoughts that are true or delightful? Then you make new names, do you?"

"I make new names then, because I like to make thoughts that are either true or delightful. They're the best," the boy said.

"Do you sometimes make two very different names for the same thing?"

"Of course not. It wouldn't stay the same if I made another very different name for it. Giving a thing a quite new name makes it be a new thing. Everyone knows that!"

"Oh, my boy, few men know that. Do you know what very nearly all men say? They say that a rose by any other name would smell the same."

"That's not true!" said the boy. "That's not true at all!"

"Of course it isn't true," said the wise old Frenchman. "I have made a verse about that, and you can learn it:

A rose with onion for its name
Might never, never smell the same—
And canny is the nose that knows
An onion that's been called a rose.

The boy smiled quietly, and skipped away.

HOW TO ATTEND A CONFERENCE*

S. I. HAYAKAWA

THE PURPOSE of the International Design Conference is, of course, the exchange of ideas, the enrichment of our own views through the support or the challenge provided by the views of others. It is a situation created specially for the purposes of communication.

Since I am a student of semantics and therefore a student of the processes of communication, your program committee has suggested that I try to place at the disposal of this conference whatever ideas I may have which might facilitate the communicative process. This is indeed a big order, and perhaps it is presumptuous of me to attempt it. Nevertheless, I find the suggestion to be a challenge, so I am going to venture some observations on the process of communication in the hope that, whether my observations are correct or not, the very fact that I make them may at least help to make us all aware of the problems of communication that confront us here in addition to the problems inherent in the subject-matter of the conference.

There are two aspects to communication. One is the matter of output—the speaking and writing, involving problems of rhetoric, composition, logical presentation, coherence, definition of terms, knowledge of the subject and the audience, and so on. Most of the preoccupation with communication is directed towards the improvement of the output, so that we find on every hand courses in composition, in effective speaking, in the arts of plain or fancy talk, and how to write more dynamic sales letters.

But the other aspect of communication, namely, the problem of intake—especially the problem of how to listen well—is relatively a neglected subject. It does not avail the speakers to have spoken well if we as listeners have failed to understand, or if we come away believing them to have said things they didn't say at all. If a conference such as this is to result in the exchange of ideas, we need to pay particular heed to our listening habits.

A COMMON difficulty at conferences and meetings is what might be called the *terminological tangle,* in which discussion is stalemated by conflicting definitions of key terms. What do such terms as "romanticism," "classicism,"

* Presented as an opening paper at the International Design Conference, Aspen, Colorado, June 13, 1955. A modified version of this paper was also presented at the Railroad Public Relations Association meeting in Colorado Springs, Colorado, June 16, 1955.

"baroque," "organic," "functionalism," etc., *really* mean? Let us put this problem into the kind of context in which it is likely to occur. For example, a speaker may talk about "the romanticism so admirably exemplified by the Robey House by Frank Lloyd Wright." Let us imagine in the audience an individual to whom the Robey House exemplifies many things, but *not* "romanticism." His reaction may well be, "Good God, has he ever *seen* the Robey House?" And he may challenge the speaker to *define* "romanticism"—which is a way of asking, "What do *you* think 'romanticism' really is?" When the speaker has given his definition, it may well prove to the questioner that the speaker indeed doesn't know what he's talking about. But if the questioner counters with an alternative definition, it will prove to the speaker that the questioner doesn't know what *he* is talking about. At this point it will be just as well if the rest of the audience adjourns to the bar, because no further communication is going to take place.

How can this kind of terminological tangle be avoided? I believe it can be avoided if we understand at the outset that there is no ultimately correct and single meaning to words like "romanticism" and "functionalism" and "plastic form" and other items in the vocabulary of art and design criticism. Within the strictly disciplined contexts of the languages of the sciences, exact or almost exact agreements about terminology can be established. When two physicists talk about "positrons" or when two chemists talk about "diethlyne glycol," they can be presumed to have enough of a common background of controlled experience in their fields to have few difficulties about understanding one another. But most of the words of artistic discussion are not restricted to such specialized frames of reference. They are part of the language of everyday life —by which I mean that they are part of the language in which we do not hesitate to speak across occupational lines. The artist, dramatist, and poet do not hesitate to use such words in speaking to their audiences; nor would the physician, the lawyer, the accountant, and the clothing merchant hesitate to use these words to one another if they got into a discussion of any of the arts.

In short, the words most commonly used in the discussion of the arts are public property—which is to say that they mean many things to many people. This is a fact neither to be applauded or regretted; it is simply a fact to be taken into account. They are words, therefore, which either have to be defined anew each time they are seriously used—or, better still, *they must be used in such a way, and with sufficient illustrative examples, that their specific meaning in any given discourse emerges from their context.*

Hence it is of great importance in a conference such as this to listen to one another's statements and speeches and terminology without unreasonable demands. And the specific unreasonable demand I am thinking of now is the demand that everybody else *should* mean by such words as "romanticism" what I would mean if I were using them. If, therefore, the expression, "the ro-

manticism of the Frank Lloyd Wright Robey House" is one which, at first encounter, makes little sense to us, we should at once be alerted to special attentiveness. The speaker, by classifying the Robey House as "romantic," is making an unfamiliar classification—a sure sign not that he is ill-informed but that he has a way of classifying his data that is different from our own. And his organization of his data may be one from which we can learn a new and instructive way of looking at the Robey House, or at "romanticism," or at whatever else the speaker may be talking about.

SINCE a major purpose of this conference is to provide ample opportunity for conversational give-and-take, perhaps it would be wise to consider the adoption, formally or informally, of one basic conversational traffic rule which I have found to be invaluable in ensuring the maximum flow of information and ideas from one person to another, and in avoiding the waste of time resulting from verbal traffic snarls. The rule is easy to lay down, but not always easy to follow: it is that *we refrain from agreement or disagreement with a speaker, to refrain from praise or censure of his views, until we are sure what those views are.*

Of course, the first way to discover a speaker's views is to listen to him. But few people, other than psychiatrists and women, have had much training in listening. The training of most oververbalized professional intellectuals (i.e., people who attend conferences of this kind) is in the opposite direction. Living in a competitive culture, most of us are most of the time chiefly concerned with getting our own views across, and we tend to find other people's speeches a tedious interruption of the flow of our own ideas. Hence, it is necessary to emphasize that listening does not mean simply maintaining a polite silence while you are rehearsing in your mind the speech you are going to make the next time you can grab a conversational opening. Nor does listening mean waiting alertly for the flaws in the other fellow's arguments so that later you can mow him down. Listening means trying to see the problem the way the speaker sees it—which means not sympathy, which is *feeling for* him, but empathy, which is *experiencing with* him. Listening requires entering actively and imaginatively into the other fellow's situation and trying to understand a frame of reference different from your own. This is not always an easy task.

But a good listener does not merely remain silent. He asks questions. However, these questions must avoid all implications (whether in tone of voice or in wording) of scepticism or challenge or hostility. They must clearly be motivated by curiosity about the speaker's views. Such questions, which may be called "questions for clarification," usually take the form, "Would you expand on that point about . . .?" "Would you mind restating that argument about . . .?" "What exactly is your recommendation again?" Perhaps the most useful kind of question at this stage is something like, "I am going to

restate in my words what I think you mean. Then would you mind telling me if I've understood you correctly?"

The late Dr. Irving J. Lee of Northwestern University has suggested another form of questioning which he describes as "the request for information concerning the uniqueness of the particular characteristics of the condition or proposal under consideration." I shall simply call these questions "questions of uniqueness." All too often, we tend to listen to a speaker or his speech in terms of a generalization, "Oh, he's just another of those progressive educators," "Isn't that just like a commercial designer?" "That's the familiar Robjohn-Giddings approach," "That's the old Bauhaus pitch," etc. It is a curious and dangerous fact—dangerous to communication, that is—that once we classify a speech in this way, we stop listening, because, as we say, "We've heard that stuff before." But *this* speech by *this* individual at *this* time and place is a *particular* event, while the "that stuff" with which we are classifying this speech is a *generalization* from the past. Questions of uniqueness are designed to prevent what might be called the functional deafness which we induce in ourselves by reacting to speakers and their speeches in terms of the generalizations we apply to them. Questions of uniqueness take such forms as these: "How large is the firm you work for, and do they make more than one product?" "Exactly what kind of synthetic plastic did you use on that project?" "Are your remarks on abstract expressionism and Jackson Pollock intended to apply equally to the work of De Kooning?"

SOMETHING else that needs to be watched is the habit of over-generalizing from the speaker's remarks. If a speaker is critical of, let us say, the way in which design is taught at a particular school, some persons in the audience seem automatically to assume that the speaker is saying that design shouldn't be taught at all. When I speak on the neglected art of listening, as I have done on other occasions at other places, I usually am confronted with the question, "If everybody listened, who would do the talking?" This type of misunderstanding may be called the "pickling in brine fallacy," after the senior Oliver Wendell Holmes's famous remark, "Just because I say I like sea bathing, that doesn't mean I want to be pickled in brine." When Alfred Korzybski found himself being misunderstood in this way, he used to assert with special forcefulness, "I say what I say; I do not say what I do not say." Questions of uniqueness, properly chosen, prevent not only the questioner but everyone else present from projecting into a speaker's remarks meanings that were not intended.

All too often, the fact that misunderstanding exists is not apparent until deeper misunderstandings have already occurred because of the original one. We have all had the experience of being at meetings or at social gatherings at

which Mr. X says something, Mr. Y believes Mr. X to have said something quite different and argues against what he believes Mr. X to have said. Then Mr. X, not understanding Mr. Y's objections (which may be legitimate objections to what Mr. X didn't say), defends his original statement with further statements. These further statements, interpreted by Mr. Y in the light of mistaken assumptions, lead to further mistaken assumptions, which in turn induce in Mr. X mistaken assumptions about Mr. Y. In a matter of minutes, the discussion is a dozen miles away from the original topic. Thereafter it can take from 20 minutes to two hours to untangle the mess and restore the discussion to a consideration of Mr. X's original point. This is the kind of time-wasting which I should like to help avoid.

ALL THIS is not to say that I expect or wish this conference to avoid argument. But let us argue about what has been said, and not about what has not been said. And let us discuss not for victory but for clarification. If we do so, we shall find, I believe, that ultimately agreement and disagreement, approval and disapproval, are not very important after all. The important thing is to come away from the conference with a fund of information—information about what other people are doing and thinking and why. The theme of this conference is "What are the directions of the arts?"—for art has many directions. It is only as we fully understand directions other than our own and the reasons for them that we better understand our own place in the scheme of things. Which is but another way of saying that while the result of communications successfully imparted is self-satisfaction, the result of communications successfully received is self-insight. It is my hope that this conference will mean for all of us not only increased self-satisfaction, but also increased self-insight.

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BACKGROUND TO KINESICS

RAY L. BIRDWHISTELL *

INTRODUCTION

KINESICS is a systematic study of how human beings communicate through body movement and gesture. There is nothing new about the recognition that visually oriented animals, human or otherwise, stimulate each other by facial expression, postural shifts, and formalized gesture.[1] From folklore to modern literature, storytellers have modified their dialogues by descriptions of body behavior. Even that most auditory medium, radio, uses a sound-effects man to support its illusions of movement. In every culture the dancer and the player have ritualized such expression. Yet the fact remains that only recently have such phenomena been subjected to systematic analysis.[2]

A by no means exhaustive survey of the literature reveals several thousand relevant titles in a dozen languages. Since man's interest in what he should do has always been greater than in what he does do, a greater proportion of these titles are concerned with ritualized movement, sacred or secular. From the Far East, Southeast Asia, and Europe comes a number of annotational systems for the preferred dance form in the particular area. Most of these are of no more than suggestive use to the student of body motion and communication. From the simplified foot charts of Arthur Murray to the intricate and sophisticated systems of Serge Lifar or the Laban School for formal ballet and La Meri's (R. M. Hughes), Pandeya's, or Nenkatachalam's annotations for Indian dance, such systems are mnemonic devices to assist the teaching of the already partially indoctrinated. Of more significance, because of their flexibility and reduced ethnocentrism, are the annotational schemes recently devised by Pollenz and Kurath for the comparative study of the dance.

A similar situation prevails for drama. Except for a few penetrating accounts

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[1] See Darwin, Charles, *Expression of Emotions in Man and Animals* (New York, 1873).

[2] Much of the preliminary work in the development of Kinesics was done during the Winter of 1952 at the Foreign Service Institute, Department of State. The author is especially indebted to Drs. George Trager and Henry Lee Smith whose insightful aid and criticism contributed so much to the original work in kinesics. See Ray L. Birdwhistell, *Introduction to Kinesics* (University of Louisville Press, 1953).

of the art of the mime, most descriptions are little more than stage directions. As in the case of the dance, descriptions of "naturalness" or "symbolic" gesturing in drama or elocution tends to be as coercively ethnocentric as a grammar primer.

Another, but fundamentally related, line of approach is provided by the psychiatrists and earlier psychologists. There is an extensive literature, particularly in German, correlating body posture, expression, and gesture with underlying psychological states. Notwithstanding their scholarly caution, most of these accounts are more stimulating than revealing. Many of these observations tend to be uni-cultural, based on hypertrophic deviants, and calmly assumptive of universal symbolism. That these descriptions "ring true" is probably a statement of our membership in the writer's symbol-system rather than one concerning the validity of the interpretations.

ALL of these approaches have combined to provide an environment, albeit a sometimes hostile one, for the development of the field of kinesics. That it now seems possible to analyse systematically the meaningfulness of motion patterning is the result of suggestions and direction from the relatively new sciences of social psychology, social anthropology, and descriptive linguistics. From the social psychologists, Klineburg, Murphy, Dunlap, Krout, and particularly, G. H. Mead, have come insights into interactional patterning. Underlying all work in social kinesics is their insistence that all communication is dynamic and irrevocably interdependent with the process of becoming human in any society.

The anthropologists, and notably such figures as Boas, Sapir, Radin, Benedict, Mead, Bateson,[3] Linton, and Labarre, have insisted that communication, linguistic or kinesic, must be studied in a cultural context and is, in fact, a cultural process. The classic work of Efron on body movement and gesture among immigrant groups established a body of research which prepares us for an understanding of sub-cultural differences in motion patterning. Once freed from assumptions concerning universal symbolism, we are prepared to examine body shifts in other than an armchair-speculative, a normative, or a "Believe-It-or-Not" perspective.

Finally, from the linguists is derived a vigorous methodology. The work of Sapir, Bloomfield, Bloch, and, especially, Trager and Smith,[4] to name but a few, provide guides which the kinesiologist, while maintaining his independence, cannot afford to ignore.

[3] Of particular interest is the work of Bateson and Mead in *Balinese Character* (Special Publication at New York Academy of Sciences, Vol. II, 1942).

[4] H. L. Smith and G. L. Trager, *An Outline of English Structure* (Norman, Okla., 1951).

THE PRIMARY deterrent to the development of the analysis of communication by body motion has been the overwhelming amount of raw material present in any interaction situation. All human beings to a greater or lesser degree react to each other's facial expressions and body movements, but so many fleeting gestures and movements are involved in a social situation and they are reacted to with so little conscious analysis that until recent times their systematic classification has been impossible. The field of micro-kinesics, however, provides us with a method whereby such data become available and manipulable. As micro-kinesic research progresses, it seems certain that our descriptions of human behavior will be enriched. By this method, a whole range of data can be drawn out of uneasy introspection into the area of objective verification.

Kinesics may be defined as the *systematic study of the visually sensible aspects of non-verbal interpersonal communication.* Following the methodological model of the descriptive linguists, the field of kinesics is divided into three divisions. As shall be obvious, these are interrelated. Experience has emphasized the possibility and the importance of keeping them separate.

I. *Pre-kinesics* deals with general physiological, pre-communicational aspects of body motion.

II. *Micro-kinesics* is concerned with the derivation of *kines* (*least particles of isolatable body-motion*) into manageable morphological classes.

III. *Social kinesics* is concerned with these morphological constructs as they relate to the communication aspects of social interaction. Its data are systematic body movements in their social context.

PRE-KINESICS

SINCE this paper is primarily concerned with restating the basic propositions of kinesics in general, no review of the research in pre-kinesics shall be attempted. Research in micro-kinesics and social kinesics is proceeding upon the assumption that *visually perceptible body shifts, whose variations have been repetitively observed and which are subject to systematization, are learned rather than somatogenic.*

In early stages of our investigation body conditions were dumped into broad categories such as "an itch," "weariness," "muscular relaxation," "tonus," and the like. Such stimuli to body movement were found to be often, if not usually, dependent upon the larger context of the act and its social definition. To "scratch," to "shift," to "stretch," to "relax," and to "tense" are but a few of many apparently simple physiological reactions which are socially defined and controlled. Such events may be studied from either a physiological or a kinesic point of view. Data from either approach provide valuable leads and establish limits to the descriptions of the other.

In this discussion I shall use the closing and opening of the lids of one eye for illustration. This example contains much behavior which is non-significant

(at the present) to kinesiological research. For instance, a high speed camera records almost a thousand positions of the lid in closing and opening. A graph derived from such a film strip shows rests, reverses, and velocity shifts which are imperceptible to the unassisted eye. Any society "selects" but a portion of this range for interactional definition. The remainder may be described as "artifacts of selection," if they can be shown to have, in a given population, no more than *discriminational meaning*, which is present when an observer reports the ability to distinguish B from A and/or C in a series.

The least isolated particle with discriminational meaning we call a *kine*. The members of any social group utilize only certain of the discriminated range of kines for social interaction. That is, out of the range of movements discriminated by a group, a portion seems to have traceable *differential meaning*. Differential meaning occurs when informants from a given group repetitively report that the variation in placement, intensity, or position of a kine "changes the meaning" of a set or continuum.[5]

Micro-Kinesics

Micro-kinesics deals with the systematization of these kines with differential meaning into manageable classes. It will be evident that this reduces the body of data with which we must deal. To jump from discriminational meaning to social meaning would leave us encumbered with a load of non-significant kines. Micro-kinesics research ensures the establishment of differentially significant units which may then be tested out for their varying contextual meanings.

In a series of situations, five young nurses reported that they could discriminate eleven positions of lid closure (eleven kines with discriminational meaning). Retesting of the nurses revealed that differential meaning kines were not precise positions but were rather ranges of positions within which the differential meanings were reported as equivalent. We define the positions within the range as *allokinic*. These ranges the nurses reported as "open-eyed," "droopy-lidded," "squinting," and "eyes squeezed tight," all of which they distinguished from "just open" and "closed." Each of these *classes* of allokines or variants within a range, we define as *kinemes*. A kineme may thus include any number of kines as long as these kines can be seen to be allokinic.

For example, in working with the nurses, we established the presence of thirty-four kines relating to the position of the eyebrows. The nurses reported twenty-three of these kines as having differential meaning. In a culture which emphasizes "looking one in the eyes" and "taking things at face value," this multiplicity of meaningful circum-orbit units should not be surprising. (Pre-

[5] I recognize the possible confusion present in the two uses of "meaning." The fact remains that we are dealing with "objective" (experimentally derived) meaning and "subjective" (common usage) meaning. *The objective requires a modifier.*

EXAMPLE OF KINESIC ANALYSIS

FIGURE I

Stress and intonation are indicated above the pertinent text, using symbols provided in Trager and Smith's *Outline of English Structure*; voice-qualifiers, e.g., the drawl, are indicated by symbols developed by them. A phonemic transcription of the text is also provided. Kinesic symbols are given below the pertinent text, but merely illustrated, not translated. Those interested in a more detailed analysis are referred to the author's *Introduction to Kinesics,* University of Louisville Press.

1. This situation was observed on a bus. The little boy was seated next to the window. He seemed tired of looking out of the window and, after surveying all of the car ads and the passengers, he leaned toward his mother and pulled at her sleeve, pouted and vigorously kicked his legs.

2. His mother had been sitting erectly in her seat, her packages on her lap, and her hands lightly clasped around the packages. She was apparently "lost in thought."

3. When the boy's initial appeal failed to gain the mother's attention, he began to jerk at her sleeve again, each jerk apparently stressing his vocalization.

4. The mother turned and looked at him, shushed him, and placed her right hand firmly across his thighs.

5. The boy protested audibly, clenched both fists, pulled them with stress against his chest. At the same time he drew his legs up against the restraint of his mother's hand. His mouth was drawn down and his upper face was pulled into a tight frown.

6. The mother withdrew her hand from his lap and resettled in her former position with her hands clasped around the packages.

7. The boy grasped her upper arm tightly, continued to frown. When no immediate response was forthcoming, he turned and thrust both knees into the lateral aspect of her left thigh.

8. She looked at him, leaned toward him, and slapped him across the anterior portion of his upper legs.

9. He began to jerk his clenched fists up and down, vigorously nodding between each inferior-superior movement of his fists.

10. She turned, frowning, and with her mouth pursed, she spoke to him through her teeth. Suddenly she looked around, noted that the other passengers were watching, and forced a square smile. At the same time that she finished speaking, she reached her right hand in under her left arm and squeezed the boy's arm. He sat quietly.

1. Child: Mama. I gotta go to the bathroom.
(mo) o o L35⊣ mother's sleeve 2

2. Mother:
T • 1 8XX1 3-3-3

3. Child: Mama. Donnie's gotta go.
R35⊣ R35⊣ R35⊣R35⊣R35⊣
mo. r. sleeve

4. Mother: Sh-sh.
R5 across child's lap-firm through 5

5. Child: But mama.
XX41

6. Mother: Later. (o openness; over-softness)
18XX1 o o

7. Child: mah mah (over-loudness; whine)
R5 zz against mother's thigh
mother's arm

8. Mother: Wait. (? rasp)
R14⊣ against child's thighs

9. Child: Oh mama, mama, mama.
XX41 H H

10. Mother: Shut up. Will yuh. o
h L35 child's l. u. arm behind own r. arm

[FIGURE I]

liminary work with German, Japanese, and Bombay Hindu informants indicates a much narrower range in this body area.)

It was found that only one of the five nurses could reproduce more than five of the twenty-three positions which they recognized to have differential meaning. Utilizing a male control group of college students of comparable ages, it was established that all could reproduce at least ten, with an average of fifteen. One extremely versatile young man produced thirty-five kines and could easily get the twenty-three with differential meaning. (Far less sex difference was noted in the ability of our Japanese and German informants. This may be because of the small number of informants in the non-American groupings). From this experiment alone, we feel we have isolated significant recognition and reproduction differences within the informant range and between the sexes. Not only do we have a larger reading or hearing vocabulary than we do a speaking vocabulary, but we may have a larger viewing than an acting list.

Our investigations indicate that in middle majority American culture, circum-eye movement combined with hand motions are prime situation-definers. These seem to be more definitive than movement of the hands, the arms, the trunk, and even of the total head. This becomes increasingly apparent when we compare such data with that derived from Southern European and Southeast Asian informants. This does not negate the importance of the remainder of the body. It is our conviction that the interpretation of the stressed body section will provide great insight into national or sub-cultural character. Ultimately, I believe, cross-cultural research will lead to the development of kinesic syntax.

Social Kinesics

Research in social kinesics awaits the developments in pre- and micro-kinesics. While no definitive research can be reported from social kinesics, there are certain promising developments. *Social kinesics* deals with body motion units with *contextual meaning*. Context is provided by the social situation which is variable in temporospacial dimensions. These dimensions must be explicitly defined before a given *act* (kineme in social context) or *action* (kinemorpheme in social context) can be isolated and measured.

The use of the term "gesture" has been thus far avoided in our discussion of kinesics. "Gesture" is restricted to those acts or actions which can be immediately interpreted by actor or viewer. Gestures have no more objective meaning than other acts. The vocalized meaning attached to the gesture does not necessarily supply us with insight into either the differential or the contextual meaning of the action of which the gesture is an interdependent but deceptively visible aspect. The usual descriptions are culture-bound rationalizations. One has only to review the variety of messages relayed by an action of which the "thumbed-nose" is the *explicit* focus to understand this.

We feel most secure when discussing the interdependent relationship between visible and audible communication. Exciting new developments in linguistics, pioneered by Smith and Trager, make possible the recognition of the systematic relationship between the communication media. This is particularly evident in the area of the relationship between such vocalized behavior as intonation patterns, phrase superfixes, and voice qualifiers. So intimate is this relationship that the trained linguist-kinesiologist has at times been able to describe many of the movements of a speaker from hearing a recording or listening to a telephone conversation. Further, we have found that an auditor may well "hear" intonational shifts which were not present in the speech pattern but which were *moved* by the speaker and vice versa.

Yet these phenomena are not always inseparably associated and reinforcing. Smith and Trager have described as *meta-incongruent* the situation which occurs when the meaning carried by the words in an utterance are contradicted by the intonation or voice-qualifiers used with it. Still another kind of "meta-incongruence" occurs when an utterance has one contextual meaning while the accompanying body motion conveys a different meaning (for example, the actors in television commercials, while verbally praising a product to the skies, can sometimes be seen rejecting it in their body motions). It can be seen that awareness of such incongruences can be of great value to the student of human personality. Such "unconscious behavior" reveals the existence of what might be called kinesic "slips" and "stuttering." "Meta-incongruences" are of great importance to the semanticist as a student of the whole communicative act.

Most of the data in social kinesics of which we have knowledge suggest the need of further training and investigation. It is our hope that the next few years will see a tremendous advance in the field. Social kinesics still awaits the test of analyzing *in situ,* as it were, kinesiological systems other than American or Western European. For the past two years we have been observing native speakers, speaking and acting German, Italian, Arabic, and Hindu, and speaking and acting English. Unfortunately, the linguistic inadequacies of those making the studies have made the correlation of auditory and visible aspects of these communications quite unreliable. We shall not feel safe until a complete field study outside of Western Europe is undertaken.

I HOPE that the reader of *ETC.* will recognize from all of this why the kinesiologist shudders at the question, "What does this gesture mean?" Even though tentative suggestions can be made as to the social meaning of an action, we are a long way from an extended list of gestures and their meanings. I am not at all sure that I even want to see such a list. It is my own conviction that the future of kinesic research rests upon the recognition that acts, like words, have only the social meaning of their performance in context. Just as dictionaries of words often stand in the way of understanding "language in action,"

so would dictionaries of gesture and body-motion stand in the way of understanding kinesics, which is the study of human body in communicative action.

Of more interest perhaps to the non-linguist is the working process of in-group conversation as considered with the aid of kinesics. As part of a study of an adolescent clique, we paid particular attention to the "origin-response ratio." Three of the nine boys in this group were, by word count, heavy vocalizers. In fifteen recorded scenes (five scenes for each of the three), they were responsible for from seventy-two to ninety-three percent *of the words* spoken. One of the three was regarded by the group as a leader. (Incidentally, he originated more conversations or new trends to conversation than any of the other boys.) But the other recognized leader had one of the lowest word count percentages of the group. He originated, by our count, at a medium rate, but he spoke only about sixteen percent of the words. His leadership seemed to be a kinesic one.

Compared with the other boys, he engaged in few unrelated acts, that is, acts not traceably related to the interactional chain. (These "unrelated acts" appear to be abortive efforts to originate action; they seem related to similar behavior in smaller children except that older children more frequently realize when the group is not responsive.) Compared with the adults in the neighborhood, he was kinesically more "mature" than the other boys. He engaged in less "foot shuffling," "dramatic thought"—a substitution (?) of kinemorphic constructions for verbal descriptions was characteristic of this group,—and he exhibited fewer hand-mouth kinemorphic constructions than his peers. Even though he vocalized relatively little, he was known as a good conversationalist. Kinesiological analysis of this boy revealed that he was a "good listener." His responses were seldom meta-incongruent, he steered the conversation with face and head kinemorphs, and he seldom engaged in leg and foot "jiggling" which generally conveys a contextual meaning of restlessness, malaise, or negation.

ENVIRONMENT AND DESIGN

WILLIAM HANSON *

WE ARE adrift in a strange and frightening world. The same breath that promises new delights sighs at the ever present shadow of atomic destruction. We witness chaos at international and local levels. Even supposedly "friendly" nations seem to turn like Dr. Jekyll into a monstrous Mr. Hyde. In fear, we plan for fantastic armies and weapons. At local levels, the quiet neighborhood of our childhood has been swallowed in a bewilderment of speed, light, and fumes. Our cities are a proved madness of industrial blight, inherently containing the seeds of crime and disease. Even the once cheerful sun which warmed our days has become an astronomical unpredictable, capable of exploding at any second. In a few short years, the solidity of a world of order has vaporized into a nightmare of uncertainty.

With every means at their behest, men search anew for the meaning of themselves and their environment. Needed is a common explanation for the new and frightening situations of today. Intense faces search the many known levels of the cosmos for patterns of order. Huge telescopes swing their searching eye into the yesterdays of the stars. More than curious human eyes peer into microscopic worlds and record the rhythmic undulations of life at its inceptions. With organized numerical systems, mathematicians attempt to predict or parallel the behavior of atomic energies. Artists face each new canvas with a spirit of purpose new to our times. Each newly revealed ordered pattern at whatever level temporarily reassures its creator or discoverer that living today is not entirely meaningless.

Yet the key is still missing. A common purpose to life is yet to be confirmed in today's terms. The successes of past ages have always had as a core the clear, continued restatement of social aims. Today, at the human level, we still limp along with yesterday's platitudes. We have yet to find the "orderer" for the twentieth century. A working definition of man, true to the human scale, pregnant with *human* desires, hopes and aspirations, rich in opportunity and realization, allowing interdependence and love, has not been established. Instead, we plan destruction.

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AT OTHER than social levels, it is possible to find in nature completely structured moving systems, whole in themselves, and interrelated with the less and more complex moving systems which surround them. At the level of the cell, there is a unity of purpose between each individual cell and the total organism which is their successful combination. In a "society" of cells there are included the complexities of individual and group dynamics or "behavior." Because of movements within each cell at molecular levels and modifications from surrounding cells, the system must be in a state of rhythmic equilibrium to survive. The life of the cell is a balanced exchange with surroundings of a highly complex nature.

At the level of visual experience, any painter or designer knows that in the successful completion of a work much depends upon the orchestration of the visual means. Lines, shapes, tones, textures, colors, have individual characteristics which must be integrated if a work of art is to result. But such knowledge is not limited to the trained and the educated alone. Almost any person can remember the pleasures of an environment rich in visual organization. The beach, the woods, the sky with its carefree but measured motions of clouds, sunsets, or moon-phases, offer pleasure and relaxation to all of us. Little of the seemingly endless structural complexities inherent in such natural scenes is immediately visible to the observer. The subtle myriads of energy systems from atomic through cellular, including plant, animal, and ultimately human social structures, escape even the most intense of persons. From atom to man, each level is more complexly organized than the preceeding; each level is in motion. All levels are interdependent.

Although most of us can grasp but little of the known structure of the natural scene, our nervous system does adjust to such wonderful working harmonies. We feel happy. Although we cannot commonly observe sub-visual levels of organization, we can experience the manifestations of such unseen systems in the rhythmic equilibrium of the familiar landscape.

On a beach each worn and rounded stone is a recording of the countless experiences of its existence. Its form is the result of contact with other surfaces during periods of ceaseless movement by the tides. Years of washing, rubbing, tumbling, scraping, have changed a jagged fragment of rock into the smooth form which we find immediately pleasing to the eye and hand. We try its weight and smoothness. We notice its texture as a visual record suggesting the transformation from a molten to a solid state. We throw it far from us, back into the water, that it may continue its transformation into new shapes—and eventually into fine sand. The process of change from jagged rock to rounded beach stone and then to sand includes numberless transformations at sub-visual and visual levels. We sense this change by observing certain constancies such as the similarity of color of cliffs, beach rocks, and sand at a particular area of seacoast. Such observations are reassuring evidence

of natural order, a record of continuity existing backward into pre-history and promising, as well, a predictable future.

THERE IS a pure joy in experiencing the natural landscape. Generated is a sense of wanting to "belong," to live always within sight of forest, sea, mountains or desert. We respond to the organically organized space, the rich diversity of the living things, the luxury of fresh air. We know without question that this is *our* world, a world in which we belong as natural creatures, a world of functioning interdependence and therefore a world with a future. We want a comparative world for ourselves and our children.

But "nature" for man is more than a landscape in the above sense. Although the organizational madness of the present form of our cities constitutes a serious threat to our very survival as a race, the substitution of vegetation for hot-top and cement would not solve the more underlying problems of which the unhuman scale of our cities is but a symptom. An "ordered" world in human terms is different from the worlds of plants, insects, and animals, where the plant may choke its neighbor from the soil, the insect may eat its mate, and the animal may kill its young. A human better world is a world more attuned with *human* nature, nature at the human level, which includes, yet differs from other levels—much as cellular levels relate to atomic, and animal life relates to plant life. A first step to more sane relationships within each man and among individuals, groups, and nations, is a general agreement on fundamental human purposes. If we honestly strip away the facade of assumed differences, each of us can find a solid core of observable progressive common directions, reflecting desires, hopes and aspirations shared by all men. But often we do not care to do this. We harbor instead a concept of individual responsibility analogous to the behavior of the cancer cell which builds in a frenzied manner but without relation to its surroundings—without plan or pattern in terms of the survival of the organism of which it is a part. The result is death.

From common purposes in action, a "real" world evolves. From experiences of proven common worth, an environment takes shape which has meaning for all. The conscious construction of integrated social relationships results in re-evaluations of all levels of structures, from atomic to social, and a consequent increase in harmony. If a senseless habit at social levels tends to bring about a weakening at cellular levels, we must effect a change in our social behavior in order to bring back health.

IN human society, the integrators function much as do the genetic and intercellular "guides" which bring about the formation of whole cells and the cooperation between cells—insuring proper sequence and distribution to the countless transformations which eventually result in that form which is the

adult organism. In man the biological entity, one initial fertilized cell becomes two; and the two, four; and the four, eight; until through wondrous transformations there exists a creature of thousands of millions of cells, each cell group being different in shape, substance, and function. Only one cell type remains true to its first self. This is the germ cell which in new combination and circumstance will provide the next generation. Throughout the atomic and biological levels of change run such levels of constancies. It is thus that coherence is maintained. It is this "thread of constancy" that is missing at our social levels. The resulting confusions endanger the human race. By the interplay of levels of constancy through levels of change, man builds societies. Man as a "designer" is faced with the dynamics of environmental, individual, and group functions of the most complex orders. To maintain coherence in a system which is inherently in motion, often including sub-systems which seem at hopeless variance with each other and the whole, is a measure of the task to be faced. The goal is a world which can contain in dynamic pattern the better characteristics of man.

♦

BROTHER, BROTHER

A MINOR planet circling around a sun
Well out toward the rim of one of the larger groups
Of stars has caught the attention of all the troops
Of the populated planets that have spun
Within its ken; for of all the countless trillions
Of wheeling astral bodies it has the best
Climate, location, soil, and all the rest
Of the good things that make it a home for billions.

They why are its people not forever gay?
Why do they sometimes suffer bitter grief?
Their lives so unhappy, dull, and endless gray?
Their misery sometimes past all belief?

Is it because they murmur "Brother! Brother!"
While seeking each to outwit and enslave the other?

CLAUDE COLEMAN

WORDS AND THINGS

ELEAZER LECKY *

PROVERBS, as universal declarations, can hardly avoid contradicting one another because there are so many of them. It is wise to look before you leap, but what if the sign you see reads, "He who hesitates is lost?" There will not be time to count ten.

Some proverbs, however, do get along well together even though they seem not to. Adages about language, for instance, often conflict superficially. One may say, "A blow with a word strikes deeper than a blow with a sword," and be contradicted by another which says, "A word does not make a hole in the head." But the two sayings are, in fact, compatible. Read as a description, the first makes figurative sense and the second literal. Both agree that words may induce psychic damage. But the second, despite its appearance, is less descriptive than prescriptive. It, too, has a figurative sense. It means: "Don't react to mere words as if they were actions—or tangible things. Don't be a fool."

In these anonymous views we meet, by implication, one of the central problems of language theory—the interrelationship between words and things. That words are not things is no modern discovery. Even "primitive" people, who attribute magical powers to some words, deny them to others. Yet the theoretical distinction between words and things has, throughout the history of western man, been irregularly maintained, and by varying arguments.

The records from "civilized" Greece and Rome are inconsistent. For Plato, words are but images of things and both are inferior to ideas (which, to Plato's critics, are no more than words). For Aristotle and Cicero and Quintilian, words are not the same as ideas or things. Yet from Sumerian times (3000 B.C. or earlier) men had sought to explain the orderly processes of the universe as manifestations of a spirit, or mind. The Greeks called this mind the "Logos," but they called the expression of mind "Logos" too. Thus the ambivalence of "the Word" in Christian theology.

From *Beowulf* to Chaucer to Shakespeare extends a consciousness of the difference between words and things. Then, remarkably, in the seventeenth century this consciousness becomes acute. The world, it seems, is turning with

* Dr. Lecky, professor of English at the University of Southern California, has for the past seven years included among his offerings a course in semantics.

new speed. The philosophers—Bacon, Hobbes, Locke—and the men of letters —Davenant, Cowley, Dryden—write of it. Cowley, in fact, addresses an ode to the Royal Society praising Bacon because,

> From Words, which are but pictures of the Thought
> (Though we our Thoughts from them perversely drew)
> To Things, the Mind's right Object, he it brought.[1]

In the eighteenth century Cowley's argument, though frequently enough restated, sounds like settled doctrine. Addison could recommend Locke to those readers of *The Spectator* who hoped to "get a reputation by critical writings," for, "an author who has not learned the art of distinguishing words and things and of ranging his thoughts and setting them in proper lights, whatever notions he may have, will lose himself in confusion and obscurity." [2]

But the eighteenth century was also a time of change. Meyer Abrams, in his *The Mirror and the Lamp*, has described an important shift. By the end of the century the mind of the poet was said not to copy, but to make its world. What, then, is the role of language? Again we find opinion at the crossroads. Wordsworth in 1805 could say:

> There are also various other reasons why repetition and apparent tautology are frequently beauties of the highest kind. Among the chief of these reasons is the interest which the mind attaches to words, not only as symbols of the passion, but as *things*, active and efficient, which are of themselves part of the passion.[3]

At almost the same time Wordsworth could also sound like Addison:

> Minute criticism is in its nature irksome, and as commonly practised in books and conversation, is both irksome and injurious. Yet every mind must occasionaly be exercised in this discipline, else it cannot learn the art of bringing words rigorously to the test of thoughts; and these again to a comparison with things, their archetypes, contemplated first in themselves, and secondly in relation to each other; in all which processes the mind must be skilful, otherwise it will be perpetually imposed upon.[4]

Coleridge, too, expressed diverse opinions about language. Te acknowledged the difference between words and things. In *Biographia Literaria*, as much as he disliked Hobbes' materialism, he quoted his warning against verbal traps. And yet Coleridge, who knew the Logos doctrine, wanted to merge words and things. In a letter to William Godwin in 1800, he had asked:

[1] *The English Writings of Abraham Cowley* (Cambridge, 1905), p. 449 f.

[2] (New York, 1924), II, 152.

[3] *The Poetical Works of William Wordsworth* (London, 1916), p. 899 f.

[4] *The Prose Works of William Wordsworth* (London, 1876), II, 57.

> Are not words, etc. parts in germinations of the plant? And what is the law of their growth? In something of this sort I would endeavor to destroy the old antithesis between Words and Things; elevating, as it were, Words into Things, and living Things, too.[5]

I will not attempt, for the present, to balance these accounts, but will add one more opinion about words, this from a recent book, *Symbolism and American Literature*, by Charles Feidelson:

> To consider the literary work as a piece of language is to regard it as a symbol, autonomous in the sense that it is distinct both from the personality of its author and from any world of pure objects, and creative in the sense that it brings into existence its own meaning.[6]

Feidelson believes that the concern of other modern critics with form and structure indicates that they too regard, or should regard, words as autonomous.

In Coleridge's sense, are words things? In Feidelson's, are words autonomous? To reach an answer, one must, I am afraid, go "sounding on/ through words and things, a dim and perilous way."

But more than that. Words and things are not enough, as they were not for Cowley, Addison, and the others. Locke said that, having begun his *An Essay Concerning Human Understanding* with just two interests, "thoughts" and "things," he was forced to introduce "words" as a third. It seems to me that all three are essential, as they are in the famous "triangle of meaning" diagramed by Ogden and Richards. Very few persons would deny this, I believe, but there are many opinions of how the triangle works.

Anyone who studies the problem soon discovers that to think about thought and to talk about talk are both reflexive and redundant. He is like the scientist whose observations are influenced (perhaps distorted) by the very instruments he needs for his experiment. He, too, discovers relativity. He wonders whether "thought-word-thing" should be one term, like "space-time-event," while he understands that there are important differences among thoughts, among words, and among things, all to be unfolded. Where can he best begin?

The question could not occur in a wordless world. Yet we are born into a language, not with one. Words, therefore, are subsequent to thoughts and things, and can best be studied after them. Similarly, since on the evolutionary ladder things come first, they have a claim to priority. But the interdependence of thoughts and things in our experience of a wordless world—and I am here concerned with human experience—is so great that any separation must be arbitrary, but convenient. To avoid, then, the still greater responsibility of

[5] *Unpublished Letters of Samuel Taylor Coleridge* (New Haven, 1933), I, 156.

[6] (Chicago, 1953), p. 49.

tracing the evolution of things, it is convenient to begin with thoughts. Both things and words will be attached to them of necessity.

The term "thought," as it has come into this discussion, has a broad, somewhat loose meaning. It refers to humanly localized or subjective data, the processes of the nervous system—autonomic and central. So considered, it includes unconscious and conscious, involuntary and voluntary, behavior. Though our knowledge of the complex mechanisms, electro-chemical, physiological, neurological, and psychological, is deficient, we know enough to abandon the mind-versus-body separation of the past.

Nevertheless there are narrow and still useful senses of "thought." For instance, the word refers to cortical activity such as occurs (1) when a present behavioral response is influenced by relevant past responses; (2) when a sense report is recognized as a sense report (not merely registered); (3) when past reports are organized for impending need; or (4) when symbols are employed.

For present purposes, it will be sufficient to examine the first of these varieties now, and the last later. The raw materials of our thoughts are not pure external things but our impressions of them. Our nervous system interacts selectively with its environment. When a present response is influenced by association with past responses, we may say that the cortex is interpreting a stimulus as a sign. A new space-time-event is perceived in relationship to old ones because of the characteristics of that event, or past events, and of the nervous system. The relationship is triadic. Feedback occurs. The space-time-event is recognized as of a sort. Presumably there are recurrences in the environment and in the organism. Though each happening is unique, similarities exist. Thus the taste of milk is like the taste of milk, is a sign of milk. And a sign of something may indicate that thing when only one is detectable: a certain voice goes with a certain face, a certain face with a certain voice. The activity of the nervous system includes both feeling and knowing. Each sign (spinach, ice cream) will have affective and cognitive importance. Out of these active sense experiences of signs and through the ability to recall and integrate them, we build our world. We can think—in a limited way—with signs.

Signs, then, are interpreted space-time-events. They are contingent upon the nervous system, and also upon these events, these happenings, these "things," which may be going on outside our skins (a light), or inside them (a toothache). The thing may occur in our absence, or in our presence without being a sign for us; or it may strike us as a sign. To repeat, a sign is one-third of a triangle. Paradoxically, as things become signs for us they become dependent upon us; in their new function they lose some of their objectivity. Nevertheless, they do not lose it all; nor do all lose it to the same extent. For that reason we can still talk of relative objectivity. And we can measure it by comparing responses, our own and other people's. We can check seeing by touching, as

when we investigate what looks like a bent reed in a pond. We can observe how other persons behave. Do they act as if it were raining? We can compare notes. "Was that thunder?" By now we will expect reports to differ. If we have chanced to ask a deaf man, we still shall have learned something about seeming and being.

BECAUSE signs exist in such variety, classifying and reclassifying them is a perpetual task. Close observation alone is not enough. Tokens for the classes are needed. For that purpose, natural signs are too special and too limited. They must assume a new role, become representative of something other than themselves. Signs must become symbols. As such, they continue to be signs in the old sense: they do not cease to be interpreted space-time-events. They affect a nervous system. But, if they function as symbols, they will now produce a response of a different sort, an indirect response. This is the kind of activity I have already called thinking with symbols.

Man, it has been said, is *the* symbol-maker. Other living creatures may use symbols to a small degree, but none rivals man, and none shows the capacity to borrow from him. Man can turn any sign into a symbol. He can make it stand for something else—a shell for money. He can make a picture of the shell. He can coin silver. He can print paper dollars. He can name all these objects. Names are the commonest and most useful tokens for labeling whatever we want to classify. Though individuals differ, we do most of our thinking with symbols, usually with words.

Words are systematized human sounds. To the ear, as sounds, they are signs, but they are also symbols. They occur and have their meaning within a physical, psychological, and social setting. When represented graphically (in writing, printing, etc.) they are both visual and phonetic signs. The graphic devices may properly be considered symbols of sounds, which in turn are symbolic.

Words have only potential meaning until they are put to use. Then their actual meaning is determined by their context. Words work together. It is artificial to take any unit of meaning, regardless of size, out of context, but a tentative study may be made of words as symbols.

The point has been made that words are used to name and classify signs. That is an important service, but, if it were all, speech would be restricted to a succession of disconnected symbols referring to a meagre subject matter, and any classification of words would need only to follow a classification of signs. Instead, the task of deciding how to group kinds of words is not easy.

A start can be made by dividing the words for signs into two sorts, depending on whether the signs are public or private, accessible to anyone or to one alone (rain and pain).

The public words point to the environment. The simpler ones refer to

classes of signs whose members differ among themselves but share readily recognizable sensory characteristics (*dogs*). Even here misunderstanding may happen, but the margin of error increases with more abstract words, the ones for broader classes containing fewer common characteristics (*animals*). At the level of speech where words refer to diverse, wide-ranging constellations of signs such as institutions (*universities*), the criteria, though sensory are far from self-evident and frequently need to be specified if communication is to succeed. A measure of the problem is suggested by the fact that the Oxford Dictionary records over fourteen thousand meanings for the top five hundred words on the Thorndike frequency list.

The words for sign qualities may also be sorted according to their immediacy. Those which describe a particular sign (*dry, dark*) are readily agreed upon so long as they do not confer upon it the evaluating attitudes of the user (*cheerful, beautiful*). Nor are the names for the qualities in general troublesome (*dryness, darkness*) unless they are assigned independent existence. If that happens, and if the quality is of the conferred kind, a fictitious entity (*beauty, evil, honor*) has been created.

Some would-be words for public signs, then, represent private preferences. Other private words report one's bodily states, emotions, mental processes (*hungry, angry, memory*). On the whole, their status is recognizable.

The words for logical relationships make no necessary reference to space-time-events. Many are "function" words (as are those for temporal and spatial relations) which express conjunction (*and*), disjunction (*not*), concession (*though*), possibility (*if*); or they are "pointer" words like *this* and *that*. Some refer to numbers or to geometrical forms (*square*). These abstractions are less substantial than a shadow on a cloud.

RECENTLY at the University of California a new element, 101, was discovered, 17 atoms of it in all. These were, of course, invisible and unweighable. Thus 101 can be called a "scientific construct," an inference from a set of space-time-events. Similarly words like "electron" and "meson," which refer to particles which cannot be directly observed, serve as means of thinking about problems in physics.

Sometimes a scientific hypothesis has been mistaken for a sign. Of this "flogiston" is a notorious example. From other fields than science come "Aryan race," "divine right of kings," "conscience," and "ghost." All are "fictions" rather than space-time-events. It is easy to recognize these errors now, but it is just as easy to duplicate them with respect to other terms.

Students of logic have wondered about the status of fictions. Since they refer to what is non-existent or contrary to fact, should they be classified as nonsense terms? Are they unintelligible? The answer depends on the criteria for intelligibility. If you insist that all unicorns and griffins be as functional as

cats, you will deny their names and meaning. But you will grant it, if you say they are anomalous.

Words of these varying sorts, then, bear unlike relationships to signs. Some refer to them almost directly, some indirectly, some not at all. In no case, however, is the word that to which it refers.

It is this very difference which accounts for much of the utility of symbols. Not only are words more flexible than signs, but they are additions to signs. They are new tools. By means of them we are able to codify, theorize, imagine, invent, communicate. We are also able to make known our feelings by naming them, but above all by suggesting them. Since responses to signs are emotional as well as intellectual, by the way we name signs we may indirectly convey our attitudes. Ordinary language is seldom strictly "emotive" or strictly "referential," but rather a blend of the two, and, governed by context, a word may change color.

This inventory reports, in minimal terms, some of the resources of language, and suggests a few of the basic ways in which they are used. Familiar idioms reflect still other ways: "give the word"; "he gave his word"; "he's as good as his word"; "they had words"; "word-play"; and "what's the good word?" Language was defined by the cynical Ambrose Bierce as "the music with which we charm the serpents guarding another's treasure." [7] Words may be used to record and conceal, to remind and command, to make and to judge. And their surface predications may have the sole function of establishing rapport, as between mother and infant or poodle, or between strangers at a cocktail party. Malinowski described this use as "phatic communion."

Aristotle contrasted the poetic use of language with the historical and the philosophical. "Poetry," he said, "is more philosophical than history," that is, less tied to particular, actual happenings. Following the rise of science in the seventeenth century, many men of letters felt that there were but two main uses, the poetic and the scientific. Wordsworth, Shelley, and Whitman, and a host of writers since their time, tried to reconcile the cognitive claims of each. In our century, science is often bracketed with technology (including rhetoric) as a pragmatic or problem-solving use, and poetry is said to be chiefly aesthetic. To correct these over-simplifications, Charles Morris, in his *Signs, Language and Behavior* (another triad, by the way), classifies sixteen separate uses of language. There are at least that many varieties, but they also form compounds. We should expect them to. It is possible for the same piece of writing to be informative, evaluative, aesthetic, and much more. To identify even its principal characteristics with the total work is a fallacy.

A well-known book by Stuart Chase is called *The Tyranny of Words*; a perhaps less well-known but more recent one, *The Power of Words*. The first title suggests villainy; the second is neutral. Both, for the sake of emphasis,

[7] *The Devil's Dictionary* (New York, 1925), p. 183.

make words sovereign. Carl Becker once put it this way: "For good or evil, words have great influence in their own right, apart from the things they represent." [8] John Selden, in his time, was more epigrammatic: "Syllables govern the world." That sounds like a proverb, like the starting point of this paper.

WHAT now may be said about the balance of power in the word-thing-thought axis? Since the elements interact, none can be all-powerful. Nor is the influence unilateral. Things and thoughts generate words. Words have an influence on thoughts, and through them, on things. This influence is always indirect. Words are not things. They can not, except symbolically, replace things. But, through their influence on thoughts, they may have the effect of things, even, in some circumstances, according to Justice Holmes, "all the effect of force." [9] That is why sometimes, "A blow with a word strikes deeper than a blow with a sword," though a word, of itself, cannot "make a hole in the head."

Now, the warnings about bad language often place the responsibility on words rather than on people. For instance, Francis Bacon, who said (in Spedding's translation of the *Novum Organum*), "the ill and unfit choice of words wonderfully obstructs the understanding," also said, "words plainly force and override the understanding, and throw all into confusion, and lead men away into numberless empty controversies and idle fancies." [10] A psychiatrist might argue that in both cases such mistakes result from the same hidden wish, and are avoidable. By taking thought one way or another, we can protect our thinking from some of the errors that our words encourage, not compel.

We can hardly escape them all. We are limited by our human nature, though it changes. We are limited by our environment, by both the signs and symbols around us. We enter into a language system (none is perfect), and it becomes so natural to us that only with the greatest difficulty are we able to get outside it. It is like the earth's atmosphere. Again, it is like eyeglasses on which we have come to depend. We see through them; we no longer see them. That is, we do not, perhaps cannot, take *these* glasses off. If, therefore, our glasses distort, we will not easily discover it.

At the group level, words, thoughts, and things interact as much as they do on the individual level. It is impossible to separate a language from a culture or the reverse. A language reinforces the assumptions and attitudes within a culture. Notions of time and space, of processes, and of other relationships become embedded in a language. They are less obvious than the

[8] *How New Will the Better World Be?* (New York, 1944), p. 75.

[9] *Schenck vs. United States*, 249 U.S., 47.

[10] *The Works of Francis Bacon* (New York, 1878), I, 78.

sounds of speech, the pronunciation, intonation, and accent, which defy the skill of most outsiders, but they are there. Characteristically, Indo-European languages require a noun plus a verb for most statements. The noun is said to be a substantive, in other words, a static thing. It has characteristics which belong to it or in it. Processes are different. They are what happens if and when a substance goes into action. The logic of this structure contradicts that of the space-time-world we now know, but for centuries it seemed flawless. Even now, as Benjamin Lee Whorf pointed out, " 'Hill' and 'swamp' persuade us to regard local variations in altitude or soil-composition of the ground as distinct *things* almost like tables and chairs." [11]

THIS is not to say that all language peculiarities reflect errors in logic. There are unlike but equally valid systems. Among Indo-European languages great differences in vocabulary simply reflect differences in the discriminations which have been made and preserved within a culture. To think in French or German is to operate with concepts not quite matched in English. It follows that some expressions, idioms in particular, cannot be translated. Languages, when hard put, will accordingly borrow terms to say the inexpressible: *angst*, *kitsch*, and *acedia* are recent importations into English.

Attitudes are also suggested by a language—at a particular time and place. Unaware, a member of a culture may copy the responses of his fellows to a word which refers to something that arouses strong feeling. "Naming," says H. D. Duncan, perhaps too forcefully, "is an evocation, an incipient action, not simply a signification. For, as we name, we love and hate, and, finally, we live and die in the roles named 'good' and 'evil' by our society." [12] In a prospering monarch, *king* and *prince* may be contrasted with *democrat*, *republican*, or *revolutionist*. Again, in a small community, *artist* and *industrialist* may have fixed connotations. To understand these tendencies is to diminish the influence of mere words.

The process is, in effect, one of distinguishing words from things. Despite our cultural conditioning, we do have a measure of authority. We can heighten our awareness (in listening, reading, speaking, and writing) so that we do not suppose that words equal things—that there are no differences among the signs a word represents, that for abstract qualities, constructs, and fictions equivalent signs exist, and that substances are separable from processes. We can search for the assumptions hidden in questions, explanations, and analyses, and what they do to thinking. What, for example, is the meaning of this part of a navy questionnaire? "To your knowledge, does the intemperate use of alcohol by this individual constitute a handicap in his business or social relationships, or has it been a problem in the past?"

[11] "Language, Mind, and Reality," *ETC.*, IX, 174, Spring 1952.

[12] *Language and Literature in Society* (Chicago, 1953), p. ix.

The tactics I have been following may seem negative and defensive. Do words ever influence thoughts favorably, and, if so, why should anybody want to school them?

In *The Three Voices of Poetry*, T. S. Eliot discusses the writing of what he calls "meditative poetry," the most personal sort. The poet, says Eliot, "has something germinating in him for which he must find words; but he cannot know what words he wants until he has found the words. . . . He does not know what he has to say until he has said it. . . ." [13] Eliot's testimony here closely resembles that of I. A. Richards in his *Interpretation in Teaching*: "most thought forms itself in and through experiments with the language that is to utter it, and . . . a step between the choice of a word and the shaping of a thought is not easily marked, though this is not at all to say that they are the same." [14] Both Eliot and Richards assign great importance to the affinities of words for one another. Feidelson, who was quoted at the beginning of this paper, thinks of words as autonomous carriers of meaning: "The typical modern writer views the task before him neither as the expression of his own feelings nor as the description of given things but rather as an adventure in discovery among the meanings of words." [15] All three writers, in my opinion, give insufficient weight to the individual experiences symbolized by the words. By means of words an individual internalizes a portion of his cultural heritage, but always in accordance with his unique personality. Thus, as he concentrates on the interior monologue, letting the words seem to happen, the complex experiences that they symbolize for him come into play. Verbal associations alone would be superficial. The behaviorist theory of thought proved untenable because it equated thinking with sub-vocalizing, an activity of the voice box. In the thinking, creating process, verbal symbols refer beyond themselves to responses. They are not things but symbols. They cannot be autonomous. If they could, by hitching the dictionary to an electronic integrator and a printing machine, we could turn out masterpieces without so much as proof-reading them.

This view does not arrest words. It lets language change and grow in accordance with human needs and powers. Innovation comes about when an individual, working with and through symbols, adds to present knowledge.

IS THERE not a sense, however, in which words are things? What of Wordsworth's declaration that they "are themselves part of the passion"? If he meant that words said over and over under the stress of emotion are evidence of passion, yes. And if he meant that their sounds are signs, yes, for, as we have

[13] (New York, 1954), p. 28.

[14] (New York, 1938), p. 277.

[15] *Symbolism and American Literature*, p. 47.

seen, symbols retain a sign function. A familiar line by Keats, " 'Forlorn!' the very word is like a bell," says this.

When, as in poetry, sign and symbol functions are both put to use, the words cannot be paraphrased without changing the meaning. More than this, the unified poem is not fully explicable. Because of the formal characteristics of the structure, the images, the rhythm, the sound, a poem resembles other art objects, music in particular. The whole is greater than the sum of the parts. The interrelationships make for complexity and ambivalence. Nevertheless, a poem is a linguistic structure and its words have meaning by convention. It has thing qualities, but it does not cease to be a set of symbols. It exists for aesthetic contemplation, but, though distanced, it is not altogether detached. Delmore Schwartz does say of the poet that "he unites things, meanings, attitudes, feelings, through the power, prowess, and benediction of words. . . ." But Schwartz's idea of things is close to the one I have just advanced: "composition, which is what the poet accompliced by all the elements of his poem when they are brought together in a unity structural, formal, intuitive, and musical—composition means putting things together, bringing them together into a unity which is original, interesting, and fruitful." [16] Most of these "things" are the sign qualities of symbols.

If, "through power, prowess, and benediction of words," a poet not only "unites things" but also unites men, he becomes Shelley's "legislator." In this sense, words "humanize." They refer less to what man is than to what he may become. They are not about facts, but about values (which, relative to a point of view, may be of plus or minus value).

Often value terms become shibboleths. Joseph Conrad, in "A Familiar Preface," envies, for the moment, "the power of mere words," such as "Glory," "Pity," and "Virtue." They enormously excite people to action, he says. "Give me the right word and the right accent and I will move the world." [17] "Stir it up," is what he means, for slogans and battle-cries have always agitated the world.

Bernard Shaw considered himself, with good reason, to be an enemy of sham. His shadow, Don Juan (Tanner), exchanges in the dream world of *Man and Superman* volleys with the Devil. Don Juan's opinions of noble words are like Conrad's. He, too, sees the deception and is not surprised:

> Beauty, purity, respectability, religion, morality, art, patriotism, bravery, and the rest are nothing but words which I or anyone else can turn inside out like a glove. Were they realities, you would have to plead guilty to my indictment; but fortunately for your self-respect, my diabolical friend, they are not realities. As you say, they are mere words, useful for duping

[16] "The Vocation of the Poet of the Modern World," in *Spiritual Problems in Contemporary Literature*, ed. Hopper (New York, 1952), p. 60 f.

[17] *A Conrad Argosy* (Garden City, 1942), p. 665.

> barbarians into adopting civilization, or the civilized poor into submitting to be robbed and enslaved. . . .[18]

After 1918 disappointment over the fruitlessness of the war caused a general questioning of values. Van Wyck Brooks, in his *New England Indian Summer,* asks: "What had become of the great old life? What had become of the great old language?" And he explains,

> The bitch-goddess had them in her toils, and the 'great words' had gone down with the great life patterns. It was no use to talk to the young about 'sacred' and 'glorious' things, especially when the war had traduced them further; and the more sacred one felt they were, the more one felt it was obscene to use the words or even think about them.[19]

Brooks quotes some lines of Edna St. Vincent Millay's *Conversation at Midnight* which say this too. The last couplet reads:

> We are a nation of word-killers: *hero, veteran, tragedy*—
> Watch the great words go down.

Possibly, the poem here echoes that part of Joseph Wood Krutch's *The Modern Temper* (1929) which laments the decline of tragedy. According to Krutch, man in the twentieth century does not consider himself heroic enough for tragedy—he cannot believe in the old values: "Perhaps it would be pleasanter if men could believe what the child is taught—that the good are happy and that things turn out as they should—but it is far more important to be able to believe, as Shakespeare did, that however much things in the outward world may be awry, man has, nevertheless, splendors of his own and that, in a word, Love and Honor and Glory are not words but realities." [20] Krutch's wistful realism has its appeal, but the final clause does not guard well enough against reification. Perhaps we are to understand that "Love," "Honor," and "Glory" are not *mere* words. (It was Shakespeare's Falstaff who said, "What is honour? a word.") Nor are they things. The point is that words and things ought to be in significant relation to each other.

Though also envying the past, Aldous Huxley, in an essay called "Writers and Readers," extolled the perennial virtues of words. Words "support," "buttress," "hold together;" they are "moulds," "channels," and "conduits." In them, Huxley said: "men find a new universe of thought and feeling, clearer and more comprehensible than the universe of daily experience. The verbal universe is at once a mould for reality and a substitute for it, a superior reality. And what props the mind, what shores up its impending ruin, is contact with this superior reality, of ordered beauty and significance." [21]

[18] *Nine Plays* (New York, 1935), p. 643.

[19] (New York, 1940), p. 498.

[20] (New York), p. 126.

[21] *The Olive Tree* (New York, 1937), p. 41 f.

THIS seems to recommend an escape from the world as it is. Granted that words give us a model by which to live, can even a frank recognition of the unreality of the verbal kingdom make this method work? To call symbols a "superior reality" is a doubtful metaphysical maneuver.

Among those who, between the wars, questioned the "verities" were such novelists and playwrights as James Joyce (*Ulysses*), Ernest Hemingway (*A Farewell to Arms*), Eugene O'Neill (*Strange Interlude*), and Maxwell Anderson (*Winterset*). Here from the last play are Mio's lines:

> It's easy if you're a fool. You see the words in books. Honor, it says there, chivalry, freedom, heroism, enduring love—and these are words on paper. It's something to have them there. You'll get them nowhere else.[22]

When Miriamne asked why he should want them, he answered, "I'm alone, that's why." Mio, of course, was made to die for love (that is on the stage, for he lived on the screen), no longer a sceptic.

When World War II broke out, Robert Sherwood, whose optimism had sometimes waivered, praised a noble cause in *There Shall Be No Night*. Just before the final curtain we hear a farewell letter from the hero, Dr. Valkonen:

> I have often read the words which Pericles spoke over the bodies of the dead, in the dark hour when the light of Athenian democracy was being extinguished by the Spartans. He told the mourning people that he could not give them any of the old words which tell how fair and noble it is to die in battle. Those empty words were old, even then, twenty-four centuries ago. But he urged them to find revival in the memory of the commonwealth which they together had achieved; and he promised them that the story of their commonwealth would never die, but would live on far away, woven into the fabric of other men's lives. I believe that these words can be said now of our own dead, and our own commonwealth.[23]

Actually, Pericles found the old words noble, not empty. He rejected them because they were not good enough. Sherwood wanted to say that certain beliefs are worth dying for. Yet he was suspicious of "noble words." Perhaps that is why Valkonen's prose sounds hesitant. It strives to say without saying.

In 1944 Archibald MacLeish contributed to the Atlantic Monthly an article entitled "The Word and the Fact." His major interest was in such political terms as "democracy" and "freedom." He wanted to save these words from corruption. He said: "Words, however those who write of words may treat them, are not objects of fashion. They are living things, real things. . . . For what are the good words, the great abstractions of a nation's speech, but the nation's inward understanding of the thing it needs to be—the coinage into purpose of the lives that made it? And how, if the meaning of these words is taken

[22] (Washington, 1935), p. 45.

[23] (New York, 1940), p. 175 f.

from them by the meaningless condition of their later use—how shall the nation know what it can be? It is possible perhaps to compromise with men. It is never possible to compromise the meaning of the words, for the words become their meanings." [24]

I THOROUGHLY agree that nations should put ideals into practice. But I am prepared to find a gap between words and things. Here the figurative language, intended to emphasize the power of words as well as our power over words, closes the gap. It identifies words with things—"they are living things, real things," they "become their meanings." It also identifies them with thoughts—"inward understanding." MacLeish, by personifying as well as reifying words, endows them with greater power than they need have, power taken from thought. Moreover, he is needlessly alarmed by the shifting of meanings. Words are forever being recombined. It is possible, depending on context, to praise or blame with the same verbal form. *Noble* has only to be put between quotation marks, as Mark Antony knew, to be put in doubt. A "good" reason may not be a reason. A man may be "generous to a fault." Yet these words are not damaged by the meanings that they carry.

Concern for the language of politics quite properly continues. Here is a final example, taken from an address by Henry R. Luce on the fortieth anniversary of the *New Republic*, November, 1954:

> This brings me to the great reality of our time: the question of War and Peace. Its dimensions are colossal, like the age we live in. . . . We discuss it, as in a parlor game, with words like co-existence, appeasement, preventive war. These are not the words of high politics. The great words of high politics are Liberty, Justice and Law—Freedom under Law. These words will never be repealed as the basic stuff to human destiny. They must therefore be made to mean something in our age. If these words perish, even for a space, America will perish with them.[25]

The last sentence restates MacLeish's idea, but the sentence before it places the responsibility on people rather than on words. The words "Liberty, Justice and Law—Freedom under Law" must be made to mean something.

There is no denying that words symbolize values and that value terms affect human beings profoundly. Sometimes we mistake them for "realities." Then we respond to them inappropriately—as if to things. When we discover our error and are disillusioned, we are likely to doubt all values. Understandably, on our way back we are word-shy. But words are not things; words are not values. Words are symbols. We make our symbols and our values. If as Bernard Shaw said, "Only on paper has humanity yet achieved glory, beauty, truth, knowledge, virtue and abiding love," [26] let no one be dismayed.

[24] 174: 52-55, July 1944.

[25] "The Promised Land," December 6, 1954, p. 19.

[26] *The Quintessence of G. B. S.* (New York, 1949), p. 22.

THE TERM "MEANING" IN LINGUISTICS

ALLEN WALKER READ *

As any field of investigation moves forward, the modifying and refining of its terminology, together with the clarifying of its assumptions, is an ever-increasing necessity. The development of linguistics has exemplified this. We have long passed the stage of being satisfied with the terms of ordinary conversation. Nevertheless, the term *meaning* is still with us, carrying along a bewildering diversity of applications from centuries of general usage. This word needs unceasing critical examination. How adequate is it? What, if anything, is wrong with it?

So far as I can find, there is no student of language who denies that the raw material of our study must in some way be differentiated from noise, from random squeaks, taps, pops, and thumps; and the word *meaning* serves to characterize the systematic relevancies that are involved in language. As long as the word is used on the highest level of abstraction, with the widest generality, it appears to be acceptable and to cause little trouble.[1] We can grant that meaning is a suffusing characteristic of all language phenomena by definition. In a behavioristic analysis this can be accounted for as an elaboration of the stimulus-response pattern.

Troubles arise, however, for the scientific student, when meaning is appealed

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[1] Leonard Bloomfield, in his essay "Meaning," *Monatshefte für deutschen Unterricht*, XXXV (March, 1943), 101-106, supposed that an intelligent observer from another planet might come and note the adjusted cooperation achieved by language. As he concluded: "Now when our observer went back to his planet and made his report about us, he would need, in whatever system of communication was there in use, a general term to cover the objects and events which are typically connected with any one terrestrial speech form. The actual student of language, to return to him, faces the same necessity, and, if he does not want to coin a new term, he will naturally choose the traditional term *meaning*."

to in concrete, particular instances. When we speak of "a" meaning, or "the" meaning, or "this" meaning, we automatically appear to erect it into an entity, to reify it. These entities do not fit into the framework of scientific investigation. They are based on the assumption of the traditional philosophical outlook, still respected and prevailing among most people today, of a dualism between mind and body or between a mental realm and a physical realm.

In the dualistic outlook, form and meaning must be correlated in some matching process. I have been haunted by the rhetorical query of Leo Spitzer ever since his controversy with Bloomfield in 1944. Spitzer asked, "By what miracle have sound and meaning been joined in the first place?" [2] When his outlook reduces him to allocating the problem to the realm of "miracle," he can make little fundamental contribution to the science of language. The work of C. K. Ogden and I. A. Richards, provocative as it has been, has a similar shortcoming, for their well-known "basic triangle" of meaning includes "thought or reference" at its apex.[3]

CAN WE fashion a terminology that will avoid fabricated mentalistic entities? The finding of a set of brilliant new terms can hardly be our solution, for people with a dualistic orientation would soon cram them back into their own system. As an instance we may cite from the field of medicine the term *psychosomatic,* intended to refer to the unified, unsplit approach to the body-mind problem. And yet listen to how an incorrigible dualist like J. B. Rhine treats it. He said: "At any rate in the new field called 'psychosomatic medicine' organic effects are casually enough attributed to the state of mind of the patient." [4] And on a popular level Mrs. Dorothy Schiff, publisher of the New York *Post,* has likewise written: "Most illnesses are due to psychosomatic causes —in other words, they are mental in origin." [5] When a fine term like *psychosomatic* can be thus maltreated, and its structural implications ignored, we see how strong the tendency is to fit new terms into old orientation patterns.

The search for a unitary, non-split analysis of language phenomena has been going on in many quarters, and I choose to mention here, as illustration, only a handful.

1. The position of Leonard Bloomfield is well-known, and he has influenced

[2] *Language,* XX (Oct., 1944), 251.

[3] *The Meaning of Meaning* (2nd ed.; London, 1927), p. 11. See especially the searching criticism of their work by Thomas Clark Pollock, *A Theory of Meaning Analyzed,* "General Semantics Monographs, No. III" (Chicago, 1942), pp. 1-25. Also I cannot accept the formulation of Stephen Ullmann, in *The Principles of Semantics* (Glasgow, 1951), involving a curiously aberrant use of the word *sense* (p. 70): "Meaning is a reciprocal relation between name and sense, which enables them to call up one another."

[4] J. B. Rhine, *Extra-Sensory Perception After Sixty Years* (N.Y., 1940), p. 93.

[5] New York *Post,* March 16, 1952, Mag. section, p. 3, col. 3.

a moderate number of students, especially those practicing in anthropological circles.[6]

2. Independently of Bloomfield, J. R. Firth of the University of London has espoused the unitary approach. He wrote in 1935:

> As we know so little about mind and as our study is essentially social, I shall cease to respect the duality of mind and body, thought and word, and be satisfied with the whole man, thinking and acting as a whole, in association with his fellows. . . . Meaning, that is to say, is to be regarded as a complex of contextual relations, and phonetics, grammar, lexicography, and semantics each handles its own components of the complex in its appropriate context.[7]

3. Charles Morris, from a background in philosophy, has approached language on a thoroughly behavioral basis and has even taken the drastic step of dropping the word *meaning* altogether from his book of 365 pages, *Signs, Language and Behavior*. As he explained his point of view:

> Accounts of meaning usually throw a handful of putty at the target of sign phenomena, while a technical semiotic must provide us with words which are sharpened arrows. . .; hence it is desirable for semiotic to dispense with the term and to introduce special terms for the various factors which 'meaning' fails to discriminate.[8]

In this careful and impressive volume, Morris developed an elaborate set of terms, such as *lexicative ascriptor, utilitator, obligatum,* etc., which serve their purpose well, but do not deal with the make-up of language itself.

4. Working in the wide field that can loosely be called the "unity of science," Alfred Korzybski developed the discipline of general semantics, in which the approach that he called *non-elementalistic* was central. He maintained that verbal habits can lead us to split up wholes in a structurally false-to-fact way. The dichotomies of meaning/form, body/mind, emotion/intellect, ends/means, etc., are the result of pathological verbalisms. Although he did not attempt to analyze language mechanisms themselves, his system of formulations revolved around the place of symbolism in human life. In 1941 he declared: "The present day theories of 'meaning' are extremely confused and

[6] The *locus classicus* for his discussion of mentalism is in his *Language* (N. Y., 1933), pp. 31-41; but see also his "Language or Ideas?" in the journal *Language*, XII (1936), 89-95; and his *Linguistic Aspects of Science*, "International Encyclopedia of Unified Science, I, No. 4" (Chicago, 1939), pp. 12-13. He did his best not to found a "school," but his work was so stimulating that in effect he did so; and his principles have been developed further at Yale, Cornell, and other centers.

[7] "The Technique of Semantics," in *Transactions of the Philological Society*, 1935, pp. 36-72, quot., pp. 53-54. For a recent re-statement, see his "General Linguistics and Descriptive Grammar," *ibid.*, 1951, pp. 82-87.

[8] *Op. cit.* (N. Y., 1946), p. 19.

difficult, ultimately hopeless, and probably harmful to the sanity of the human race." [9]

5. The development of "information theory" has had a benign influence in the direction of a non-mentalistic linguistics. The coding machines can handle only mechanical operations, and therefore a rigorously operational procedure has had to be devised. The accommodating to these limitations has led a number of scholars to modify their theories in a behavioral direction.[10]

Other workers of this same general orientation, such as George Trager, Henry Lee Smith, C. C. Fries, Zellig Harris, etc., will be mentioned in later connections.

THE DEVICE that most firmly establishes the "entitizing" of "a meaning" is the frequent grammatical pattern of saying that "a word has a meaning." The verb *has* implies that a something is possessed. Nowhere is this pattern more prevalent than in the practices of lexicographers, and let us turn to these next.

Nearly a century before linguistics could be called a science, the best English lexicographers had developed the practice of collecting quotations, and these served to emphasize the importance of context. However, when these quotations are regarded merely as "illustrative examples," as they often are called, they seem to be nothing but decoration, and the definition takes on an *a priori* character. The very procedure of isolating the evidence away from its social setting leads to an artificial result, and dictionaries appear to set forth reified meanings in serried ranks. It comes natural, even to the most enlightened of us, to say, "This word has two meanings," "The other word has three meanings," etc. James A. H. Murray, in the Introduction to the *Oxford English Dictionary* in 1884, stated this outrightly:

> Some words have only one invariable signification; but most words that have been used for any length of time in a language have acquired a long and sometimes intricate series of significations, as the primitive sense has been gradually extended to include allied or associated ideas, or transferred boldly to figurative and analogical uses.[11]

The words *signification* and *sense*, in lexicological use, are so close to *meaning* that they are no improvement.

[9] *Science and Sanity*, Introduction to the 2nd ed. (Lancaster, Pa., 1941), p. x. See also his important essay of 1950, "The Role of Language in the Perceptual Processes," in *Perception: An Approach to Personality*, ed. Robert R. Blake & G. V. Ramsey, N. Y., 1951), pp. 170-205.

[10] George A. Miller, *Language and Communication* (N. Y., 1951), is oriented towards these problems; and the copious literature is there cited.

[11] In the reprinting of 1933, I, xxxi.

But is this reification inevitable in lexicography? Theoretically it is not. The so-called meaning is a set of "features" to which users of a language have become conditioned. These features could be set forth informally, without the arbitrary definitions that seem to create formidable entities.[12] In the compilation of the *Oxford English Dictionary,* the intermediate or transitional quotations were discarded as being "ambiguous" or "not clear," and the resulting neat patterns are false to actual usage. The theoretical fluidity of these features that are abstracted from a social setting is hard for many people to admit, especially philosophers. Bloomfield has stated the principle that "every utterance of a speech-form involves a minute semantic innovation." [13] And yet in denouncing this position, Ernest Nagel, a Columbia philosopher, has declared: "If this were really the case, no valid inference could ever be drawn and no inconsistency ever exhibited." [14] Thus some philosophers achieve their false absolutisms.

In the project called "The English Semantic Count," at Teachers College, Columbia, the workers have attempted to count the uncountable, by assuming that they have access to reified meanings. In actual practice, they simply compared their contexts with the numbered definitions of the *OED,* thus depending upon the arbitrary slicings of its editors.[15] These "semanticists," as they called themselves, agreed with one another, on the average, about 85% of the time.[16]

LET US pass now from a consideration of lexicon to that of morpheme analysis, as practiced by linguicists.[17] Rigorous linguicists have reached the con-

[12] I have set forth how this could be done in my paper, "The Lexicographer and General Semantics, With a Plan for 'A Semantic Guide to Current English'," in *Papers from the Second American Congress on General Semantics,* ed. M. Kendig (Chicago, 1943), pp. 33-42, esp. pp. 34-35. The project of the *Semantic Guide* has been under way since that time, and my files for it now have well over 25,000 alphabetized quotations and as many again waiting to be processed. See also the report of progress in *Studies in Linguistics,* I, No. 17 (April, 1943), 4.

[13] *Language, op. cit.,* p. 407.

[14] *Journal of Philosophy,* XXXVIII (Dec. 18, 1941), 721.

[15] Irving Lorge, "The English Semantic Count," *Teachers College Record,* XXXIX (Oct., 1937), 65-77, esp. pp. 66-69.

[16] Irving Lorge, *The Semantic Count of the 570 Commonest English Words* (N.Y.: Bureau of Publications, Teachers College, Columbia University, 1949), pp. 4-5. He has found, with regard to the *OED,* he says, that "some of the distinctions among numbered and lettered meanings are excessively precise."

[17] I present this coinage for your sufferance. The two rival sets of contexts of the word *linguist* have long been a nuisance—on the one hand, in popular use, a set referring to "polyglot," and on the other, among specialists, "scientific student of language." The word *linguistician* has had some currency since 1895, as noted by Fred W. Householder and T. A. Sebeok, in *Am. Speech,* XXV (Oct., 1951), 221-22; but it is so awkward and

clusion that morphemes can be segmented on the basis of their relation to each other, and the attribution of a particular "meaning" to each is merely a bow in the direction of traditional ways of talking about language. In Zellig Harris's words:

> Descriptive linguistics has not dealt with the meanings of morphemes; and though one might try to get around that by speaking not of meanings, but of the social and interpersonal situation in which speech occurs, descriptive linguistics has had no equipment for taking the social situation into account: it has only been able to state the occurrence of one linguistic element in respect to the occurrence of others.[18]

Trager and Smith hold a similar point of view in this matter. As they say, "The recurrences exhibit patterns of occurrence and distribution." [19] They admit that meanings of utterance fractions can serve as "a general guide and short-cut to the identification of morphemes," [20] but in principle it is not necessary: "The theoretical basis of the analysis then becomes evident: it consists of the recognition of the recurrences and distributions of similar patterns and sequences."

In his practice, C. C. Fries arrives at a similar position by correlating, as he says, the "regularly recurrent sames of the stimulus-situation features, and the regularly elicited recurring sames of response features." [21] Here the word *same,* certainly a neutral one, carries the burden of the terminology, and yet he insists on labeling these as "meanings." I query whether such a labeling is necessary or operationally entailed: perhaps it is a gesture in the direction of popular understanding.[22] Other definitions are open to serious criticism, as when John B. Carroll describes morphemes as "the smallest units of structure which embody

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cumbersome that most of us have refrained from adopting it. I submit *linguicist* as a great improvement over *linguistician.* It was inspired by the distinction made over two decades ago by Professor Kemp Malone in his essay, "The Terminology of Anglistics," in the *English Journal,* XIX (Oct., 1930), 639-51, between *Anglist,* a student of English culture in general, and *Anglicist,* a student of a particular phase of the subject. Cf. also C. S. Peirce's distinction between *pragmatist* and *pragmaticist.* Thus the word *linguist* can be left to its fate in popular usage as "polyglot," and the neat *linguicist* can serve our linguicistic needs.

[18] "Discourse Analysis," in *Language,* XXVIII (Jan., 1952), 2. His procedure is set forth in his *Methods in Structural Linguistics* (Chicago, 1951), *passim,* esp. pp. 25-28, 156-96.

[19] George L. Trager and Henry Lee Smith, Jr., *An Outline of English Structure,* "Studies in Linguistics, Occas. Papers, No. 3" (Norman, Oklahoma, 1951), p. 53.

[20] *Ibid.,* p. 54.

[21] "Meaning and Linguistic Analysis," in *Language,* XXX (Jan., 1954), 57-68, quot., p. 65.

[22] This manner of statement does not seem to me to invalidate the actual methodology in his brilliant study, *The Structure of English* (N. Y., 1952).

grammatical or lexical meanings." [23] His stipulation "which embody" is an especially unfortunate pattern to fall into.

It will be noted that the word *distribution* occurs in some of these accounts, and it can be made to carry a heavy burden in describing what has usually gone by the name of "meaning." If we describe and classify the elements of speech in terms of their relations to social situations for lexicon and their relations to one another in morphemics and syntax, is this not the same as saying their *distribution?* Objective as this sounds, it has been challenged. W. Haas, of Manchester University, England, developing the approach of J. R. Firth, has recently pointed out that even the reliance on the term *distribution* has its dangers. As he says:

> The distributional definition of a sign is disguised as an analysis of it. Meaning, although in fact defined by the sign's function, is presented as if it were contained within the limits of its form—the "content" of the form. Sounds and meanings continue to be forced into some kind of parallelism —the empty frame of the forsaken psycho-physical theories of language. The distributional relations of a sign masquerade as components of it.[24]

Although this strikes me as hypercritical, or even carping, the Firth-Haas solution is to emphasize *function.* As Haas says (*ibid.,* p. 78): "Speech *engages* in social situations, but its internal structure does not 'correspond' to them." This outlook leads to what Haas calls "a Functional Theory of Meaning and Form." He concludes: " . . . the meaning of an element is not the content, it is the functions of its form. . . . In this way, we seem to have freed ourselves of the perplexities of Correspondence Theories of Language, the psycho-physical version or any other." (*Ibid.,* p. 81.)

OTHER problems arise when we pass on to the subject of syntax. Here too, Trager and Smith have said boldly: "It is emphasized that all this is done without the use of 'meaning': it is formal analysis of formal units." [25] And yet C. C. Fries has found it necessary over a period of years to make a sharp distinction between what he calls "lexical meanings" and "structural meanings." [26] Is this again a bow towards popularization? Need a syntactic category be labeled a meaning? Perhaps Martin Joos's statement in this connection is *apropos:* " . . . it is the category that tyrannizes over us, not the form, and not

[23] *The Study of Language* (Cambridge, Mass., 1953), p. 24.

[24] "On Defining Linguistic Units," in *Transactions of the Philological Society,* 1954, pp. 75-76.

[25] *Outline of English Structure, op. cit.,* p. 68.

[26] This began in his article, "Implications of Modern Linguistic Science," in *College English,* VIII (March, 1947), 314-20, and continued in *Structure,* p. 56 and elsewhere, and in the article "Meaning and Linguistic Analysis," *loc. cit.,* p. 66.

the meaning either; and even a word like *sheep* must be, each time that it is used, either singular or else plural." [27]

As a sample of syntax, let us take a bit of light repartee from a feather-brained English novel: " 'By trade he's a corn-chandler' [said one character]. 'And what on earth *is* a corn-chandler?' Peggy asked crossly. . . . Lady Mear said: 'A man who chandles corn, I suppose. Even my underrated intelligence can work that out.' " [28] To be sure, her answer was not the one requested. She was asked for a lexicological account, "In what social situations does the word *corn-chandler* operate?" However, she answered by manipulating forms, and Fries would say that she knew, or used, structural meanings. But is it not sufficient to say that she demonstrated her conditioning to the equivalences of certain syntactic form classes? The whole situation in the above incident was suffused with generalized meaning, but do we need to appeal to any lump of concretized meaning?

The great danger in attempting to exorcise reified meaning is that one will merely push the problem into other terms, and they will carry the same burden in a masked way. Is *signal* blameless? Are *purport* and *import* profitable? What of the phrases with the adjective *semantic?* [29] I feel that the phrase *semantic content* implies a "thingness" that is parallel to form, and am therefore unhappy at the statement of John Lotz: "Speech is a *tool* for communicating a semantic content, a meaning." [30] However, the phrases *semantic value* and *semantic dimension* do not seem to me to lead to hypostatization.[31]

The word *meaning* has often implied far more of richness in the interpretation of life than is involved in descriptive linguistics. If we use the word *meaning* to refer to a generalized suffusion throughout human relations, we can say that it is multi-dimensional. These dimensions deserve study even if this puts us somewhat in rivalry with sociologists. Beyond the narrower linguistic contexts, the fuller contexts can be studied, involving the total evaluational processes of people in a cultural environment. Fries calls this "social meaning" but notes that it "is not a completely satisfactory term." [32] I suggest that to

[27] "Language Design," in *Journal of the Acoustical Society of America,* XXII (Nov., 1950), 703.

[28] Barbara Worsley-Gough, *Public Affairs* (London, 1932), p. 149.

[29] The background of this word is found in my study, "An Account of the Word 'Semantics'," in *Word,* IV (Aug., 1948), 78-97.

[30] "Speech and Language," in *Journal of the Acoustical Society of America,* XXII (Nov., 1950), 712.

[31] I used the term *semantic value* in my paper, "English Words with Constituent Elements Having Independent Semantic Value," in *Philologica: the Malone Anniversary Studies,* ed. T. A. Kirby and H. B. Woolf (Baltimore, 1949), 306-312.

[32] *Structure of English,* pp. 293-96, esp. p. 295, footnote 21.

speak of "dimensions" of meaning, to be labeled when we identify them, would be a solution.

Alfred Korzybski, when operating in the larger context of the relationship of the individual to cultural and philosophical systems, found that "theories of meaning" were too restricted, and he had to move on to terms like these: "neuro-semantic and neuro-linguistic living reactions of Smith $_1$, Smith $_2$, etc., as their reactions to neuro-semantic and neuro-linguistic environments as environment." [33] I would like to raise the question here whether the term *neuro-linguistic* would not be useful in some contexts among linguicists? We know, of course, that anything *linguistic* is in the last analysis embedded in a conditioning of the nervous system; therefore *neuro-linguistic* ought to be tautological. But when the point needs emphasizing, as it often does, the word *neuro-linguistic* is available. Moving in a sphere well beyond linguistics, in metalinguistics if you wish, Korzybski found the term *evaluation* most serviceable of all. It functions in the unitary, non-split outlook, drawing together "body/mind," "emotion/intellect," etc., in the reaction of the organism-as-a-whole. When, as students of language, we hold ourselves strictly to our descriptive work, both lexicological and structural, we need not lose sight of these larger considerations and can take pride that our findings are central to the full interpretation of human life.

IN CONCLUSION: 1. The retaining of the word *meaning* for use in the abstract, generalized application, describing a necessary component of the data of language itself, is justifiable. This wards off the threatened criticism that "meaning is left out of account."

2. Beyond this one application, however, the word *meaning* seems to cause havoc and confusion wherever it is used. It can hardly be used without implying, structurally, that a mentalistic entity corresponds to a form. Such mentalistic entities are beyond the reach of scientific investigation; instead, we have to find some formulation that makes investigation possible.

3. In the study of lexicon, there should be a re-emphasis on context and the function of symbols in personal and social situations. Since "the dictionary" is the most usual tool that people encounter when they turn their attention to language, the conventional listing of so-called "meanings" or "senses" sets the verbal pattern that creates "entities" out of symbolical relationships.

4. In syntax too the term *structural meaning* has its dangers, in appearing to establish entities. A greater reliance upon words like *relation* and *function* would serve to put analysis upon a sounder basis.

5. In areas beyond linguistics, such phrases as "the meaning of life" or "the meaning of it all" have a hallowed, dedicated ring about them. If they are to be transmuted into usable formulations, the terms *evaluation* and *orientation* represent a sounder approach.

[33] *Science and Sanity*, Introd. to 2nd ed., p. x.

GENERAL SEMANTICS AND THE NEW BEHAVIORAL SCIENCES*

ANATOL RAPOPORT

THERE IS in the library of my two-year-old daughter an opus entitled "The Friendly Book." It is much like her other books, which have passed the rigid inspection of her parents. It talks about familiar things in a cozy way, presumably to encourage observation of the environment and a fondness for it. The sub-culture to which this little girl's parents belong (the "egg-heads") entertains as definite ideas about the importance of a child's moral guidance as the Victorians once entertained. Where the Victorians once placed their faith in directives, extolling the traditional bourgeois virtues (honesty, industry, chastity, and respect for property), the modern so-called progressive parents have equal confidence in "non-directives" carefully designed to bring out the potentialities of the individual and to "socialize" him.

Ordinarily I would not have noticed anything remarkable about the "Friendly Book" except that its title brought to my mind another children's book called "The Important Book," which came out a few years ago. That title remained in my memory because the book was thoroughly panned in the pages of *ETC.* It was panned because it was directive in an area where general semanticists are especially sensitive: it was an attempt to tell the child what he should abstract from his observations. For example, there was a little essay on water, I think (I quote from memory): "Water fills lakes and flows in rivers and out of faucets. It falls from the clouds, etc. But the *important* thing about water is that it is *wet.*" There is a little essay on spoons: "Spoons are found in drawers and they are bright. They are long at one end and oval at the other. But the *important* thing about a spoon is that you eat with it." And so it goes about all the familiar things, each little essay ending with the Important Thing. All this leads to the climax, the essay on You. "You may be a little boy or a little girl. You have hands and feet. Your hair may be yellow or brown or black. But the *important* thing about You is that You are You." (Presumably emphasis of the importance of the individual).

* Presidential address, presented at the Second Conference on General Semantics at Washington University, St. Louis, June 11, 1954.

As I remember, the reviewer was quite incensed about this attempt, and, I believe, rightly so from the point of view of what general semanticists hold sacred in mental hygiene. The cardinal principle of mental hygiene, as it is derived from the principles of general semantics, is to prevent the sort of closure which the "Important Book" seeks to establish. "Closure" means a final commitment to a particular way of abstracting and evaluating. The general semanticist sees closure in the tyranny of the stereotype, in the breakdown of communication, and in neurosis. The prophylactic philosophy of general semantics is founded on the prevention of closure, and its therapeutic philosophy on the break-up of established closures. That is what is meant by extensional orientation: when the individual learns to turn from his word-maps long enough to perceive the more primitive stimuli impinging on him, the non-verbal sights, sounds, smells, etc., presumably he is enabled to form *alternative* ways of organizing these primitive, "factual" experiences. This is also the moral lesson of metalinguistics. The metalinguist or the anthropologist who succeeds in abandoning his verbally-conditioned abstracting habits long enough to experience the world as it is "organized" by the culture he is studying gains a vantage point in understanding not only that culture but the limitations of his own. Also in science, the really fundamental advances have been shown to have crystallized around some new, revolutionary ways of looking at the world—that is, around new, unusual systems of abstracting.

To preserve this ability to form new kinds of abstraction is, in the opinion of general semanticists, a primary human goal. It is therefore understandable why the author of a book written for two and three-year-olds became the target of severe criticism in our journal. She seemed to be motivated by an opposite goal.

It seems to me that the situation in the new behavioral sciences can be described in similar terms and that therefore the principles of general semantics are germane to the problems involved.

WHAT are the new behavioral sciences? The word "behavioral sciences" was coined in 1949 by a group of people at the University of Chicago "to refer to all the overlapping biological and social disciplines concerned with the study of behavior, human and subhuman." The key words in the definition are "behavior" and "overlapping disciplines."

Let us look at the meaning of "behavior" first. The word has ordinary every day connotations intuitively familiar to all. However to give an extensional or an operational definition of behavior is not easy, because the range of behavior is tremendous. When an amoeba puts out pseudopods it is "behaving." When I am talking to you and when you are listening to me, or half-listening, or not listening, you are behaving. When creatures eat, procreate, build nests, they are behaving; when people play games and worship and kill each other,

they are behaving. How can a unified method ever be forged to deal with all this wide variety of phenomena? And what shall the objectives of the method be? Shall behavioral science become a vast taxonomy like the biology originated by Aristotle, which flowered into the Linnaean system of phyla, classes, orders, families, genera, and species? Shall it be a system of meticulous observation of everything that happens and an attempt to say what follows what in the best empirical tradition? Shall it be an experimental science with careful controls and statistical evaluation of results? Or shall it be an imposing system of mathematical deduction like physics has become, where new truths are discovered first with pencil and paper and then tested against experience?

Or, perhaps, as some maintain, it cannot be a science at all in the usually accepted sense of the word. Perhaps behavior, especially human behavior, is so intricate and elusive, that it is impossible to describe it in words, because if you tried you would be describing only the superficial aspect of it (as when you describe a symphony by listing the notes and chords in succession)? Perhaps, as in music, the important aspects of human behavior cannot be objectively talked about at all but only "understood," "appreciated," or "felt."

If a science of behavior is possible, what about its applications, especially to human behavior. Are there moral questions to be considered? If so, what are they? How are conflicting ideas about moral responsibility to be resolved?

All these questions are of concern to the proponents of behavioral science. Many and conflicting answers arise among them, but on one matter there is unanimity. A unified method can come only from a fusion of methods. Hence the emphasis on the other key word in the definition, "overlapping disciplines." The enterprise must be interdisciplinary, a joint enterprise by people trained and thinking in terms of several specialized fields. One source of hope for such an enterprise lies in the overlapping character of these fields. Psychology, for example, is interested in the behavior of the individual. At least some aspects of behavior are understandable in terms of the functioning of the nervous system. Therefore the nervous system is also a concern of the psychologist. But so it is of the physiologist. There is therefore an area where the two disciplines interact. Again, the sociologist, in studying how institutions function, may or should be interested in how they evolved. But that is a primary interest of the historian. On the other hand, the sociologist realizes that institutions function because the behavior of individuals falls into certain patterns which help determine these institutions. Therefore the sociologist and the psychologist have an area in common. The psychologist too has a historical problem. He may be interested in the history of a behavior pattern from the point of biological evolution. He must therefore confer with the general biologist or, perhaps, with the geneticist. Whenever behavior obviously relates to language, the linguist has a job. But he finds that pure linguistics with its preoccupation with phonemes

and grammatical structures is not much help. He needs to delve into semiotic—the generalized theory of symbolic behavior, and there he comes in contact with the metalinguist, the semanticist, and the anthropologist.

It is therefore not enough to list behavioral sciences as biology, physiology, psychology, sociology, anthropology, linguistics, etc. It is necessary to point out their very important areas of contact and interdependence. In this interdependence lies the hope of a unified method.

ANOTHER hopeful sign from the point of view of possible integration is in the discovery of *structural similarities* of various levels of organization of behavior. For example, the living cell represents a certain level of organization of organic matter. Its behavior (growth, metabolism, response to stimuli, etc.) is assumed to be determined by this organization. An animal is a vast aggregate of cells. It, too, is organized in a certain way, and it, too, behaves (grows, metabolizes, procreates, responds to stimuli). To the extent that there are structural similarities between the organization of the cell and that of the animal, there ought to be similarities in their behavior. In fact, such similarities are reflected in the identical terms applicable to both levels of organization (growth, metabolism, etc.) Furthermore, there are larger levels of organization—the group (or the ant hill or the bee hive), the city, the nation, the species. It seems a good idea to try to find similarities in their organizational structure. If such similarities are found, the way is opened for a unified theory of behavior.

The hunt for abstract similarities is the job of the mathematician. It was the mathematician in physical science who noticed that the damped motion of a pendulum and the flow of an alternating current through a circuit containing resistance, inductance, and capacitance, although entirely different in content, have similar structural characteristics and therefore can be described by the same set of equations. The mathematician notices that the disappearance of a radioactive substance and the death rate of an irradiated bacterial culture (under certain conditions) are governed by structurally similar laws and therefore describable by similar equations. Epidemics and rapidly spreading fads or rumors are structurally similar. The apparently purposeful behavior of animals (like chasing and catching prey) has been duplicated in self-aiming anti-aircraft guns and target-seeking torpedoes, again thanks to the insights of the mathematician. Thus the apparent tremendous diversity of forms of behavior can be reduced to certain general types. This aspect of behavioral science has been called "general system theory." The general system point of view requires the turning away of attention from the specific *content* of a behavioral situation and focusing it on the structural form.

It seems, then, that a unified method can arise when the limitations of the heretofore prevalent specialized methods become apparent, when the spe-

cialists learn to look away from their habitual abstractions long enough to realize that there are other equally (or unequally) valid ways of approaching behavior. On this broadening of conceptual horizons the success of the interdisciplinary enterprise depends. We see now the close connection between the principles of general semantics and the proposed method of the new behavioral sciences. The venerated symbol of the general semanticists which has appeared on much of our promotional literature, the elephant explored by six blind men, can serve in an equal capacity for behavioral science.

The hope is that an impasse like that of the observers in the elephant story can be circumvented, that once communication is established, once experiences *other* than one's own are to a certain degree internalized, the blind men can come to realize that they are individually blind. Through this realization can come a collective victory over blindness.

I WILL ILLUSTRATE by describing the intellectual turmoils of a particular "blind man," namely myself. I was brought up as a mathematician, and my scientific interests centered around the method of mathematical physics and mathematical biology. Korzybski always supported that method as a model of the non-aristotelian orientation. It is instructive to see how that method operates.

Physics studies well-defined systems. A system is something you can delineate so that you always know what belongs to it and what doesn't. For example the solar system is a system. A container filled with gas is a system. The history of a system is told in terms of what happens to its parts, which may be bits of matter or states of affairs, such as concentrations or temperatures or velocities, or electric potentials. In other words, physics studies events within a system. A physical event is always identifiable within a certain portion of space and within a certain interval of time. Knowledge about these events can be obtained legitimately in only two ways. An event can be inferred by certain fixed rules of reasoning (usually mathematical) or it can be observed either directly or by means of instruments. The mathematical physicist specializes in the former method of obtaining knowledge. He is considered to have scored a success if, after he has obtained some piece of knowledge by mathematical computation, the result is confirmed by direct observation. There have been many spectacular successes of this sort. For example, the existence of the planet Neptune was proved and its position determined by mathematical computation, and the planet was then directly observed through the telescope. Another famous example was the mathematical proof of the equivalence of mass and energy by Einstein in 1905 and its realization in the explosion of the atomic bomb forty years later. Sometimes direct observation is impossible, but corroboration is obtained by different independent computations. For example, the mass of the electron, which obviously cannot be obtained by weighing an electron on a scale, was arrived at through computations from different sets of data in

different experiments. Since the value obtained was nearly the same in all cases, the result is considered confirmed.

There is no doubt that mathematical physics has been the most consistently successful method of obtaining knowledge devised by man. The criterion for success in obtaining knowledge is the scope of the knowledge *and its objectivity*. Physical knowledge is objective in that disagreement on any question in physics can be only temporary. This is so, because the rules for obtaining knowledge are the same for all physicists. The rules of mathematical deduction are everywhere the same, and so are the rules of observation. If two physicists disagree, the root of the disagreement can, in principle, always be determined. Either they did not start from the same assumptions, or one or both made mistakes in computations, or they made mistakes in observation. They cannot rest until they find the reason for the disagreement *and correct it*, or else they are no physicists. (Usually unresolved disagreements stem from different theoretical formulations which had not yet been put to the test of experiment or observation. The results of direct observation are always the last court of appeal.)

Now the method of mathematical physics has been so successful that it is not surprising that many serious thinkers began to wonder whether this method cannot be applied elsewhere, say in studying biological systems or behavior. And in fact the attempt to extend the method of mathematical physics to biology and to social science was made and has had considerable, though sporadic, success. However, mathematical biology and sociology are still pretty tough going, and the reason is not far to seek. The characteristic thing about physical events is their *reproducibility*. Physical events are easily reproducible because the systems in which they occur can be easily *isolated*. For example, the solar system, one of the first systems studied by mathematical physics, is already isolated. The sun is so far removed from the other stars that their effects on the solar system are negligible. That is why the system behaves so regularly. Viewing it is like viewing the same movie over and over. It can be studied at leisure. On the other hand events involving living things cannot be isolated. An organism isolated from its environment must die almost immediately. Therefore, if there is any hope of making the behavior of living organisms reproducible, the system to be isolated must include both organism and environment. But now arises a most perplexing question. What *is* the environment of a behaving organism? Through its sensory organs we know it receives certain impacts of energy, and these impacts are then somehow *coded* or transformed within the organism, mainly in its nervous system, if it has one. It is these *coded* impacts that determine the reactions of the organism to its environment which we call behavior. The general semanticist calls the coding *evaluation*. Whatever we call it, the fact remains that the coding systems are of immense complexity and intricacy and at least in higher organisms (those with com-

plicated nervous systems) the *codes keep changing* through the organisms' history. *A central problem of behavioral science approached through physics is to break the codes.*

To get the idea of the difficulty of the problem, let our imagination roam a while. Suppose the traditional Man from Mars came here to study us and somehow got the idea that to understand the behavior of human beings it is most important to study the peculiar sounds they produce. Accordingly our Martian, being a good physicist, sets about studying these sounds as physical events, as patterns of condensation and rarefaction of the surrounding air. Some patterns turn out to be similar to others, and he arranges all utterances according to the similarity of the associated patterns, much as the early biologists classified animals and plants by their external appearance. Now among the utterances of human politicians collected by our Martian let us look at these three:

1. The rights of the individual should be sacked.
2. The rights of the individual should be sacred.
3. Governments must guarantee the inviolability of the person.

Our Martian, classifying the utterances by the similarity of their sounds, thinks that the second utterance is practically identical with the first, while the third has nothing to do with either.

If we could communicate with this Martian we would tell him that his method of classification (his framework of abstraction) is all wrong, that to understand the utterances of human beings he should study something called "meaning." But how are we to communicate to him the meaning of "meaning" if the only kind of language he understands is that of physical events accessible to his instruments?

This sort if dilemma is likely to be encountered by anyone who has ever pondered the question of how—if at all—the method of physical science, eminently successful in its own universe, can be applied or extended to the study of behavior. I remember vividly how the dilemma hit me. I wanted to cling to psycho-physical parallelism, that is, to the fundamental assumption that events which determine all forms of behavior are physical events and that the problem of explaining behavior is the problem of systematizing these events. But I began to appreciate the prodigious difficulty involved in that problem.

The difficulty in finding correspondences between physical events (such as the sounds of utterances or other physical stimuli impinging on the organism) and the organism's behavior patterns resides in the peculiar circumstance that *the codings are not continuous.* That is, the continuity of events in the environment does not correspond to a continuity in the patterns of behavior. It is for this reason that it seems that events involving complex behavior are not reproducible. The physicist does not really study a physical system. He studies an idealized model of the system. But he knows that if his idealized model is

sufficiently similar in structure to the system it represents, then the actual behavior of the system will be not far off from the inferred behavior of the model. That is, a small error in the map results in a small error in the knowledge of the territory. Thus if the models are arranged according to small differences among them, the corresponding territories will be arranged about in the same order. This is *continuous* mapping. The mapping of verbal utterances on meaning, however, is *not* continuous. A very small difference in the utterance may correspond to a tremendous difference in the meaning. It is reasonable to suppose that such discontinuities of mapping (or coding) may be characteristic of other types of stimuli too.

ONE IS TEMPTED at this point to give up the whole idea of finding a physical determinant of behavior. Indeed, why should one cling to the faith that all phenomena, including those relating to the most complicated behavior of the most complicated organisms, are derivable from events circumscribed in space and time. Why must the materialistic framework be held as underlying all reality? The answer is, if course, that it is by no means necessary to hold on to this faith. Many serious thinkers and investigators of behavior do not subscribe to that view at all. But Alfred Korzybski did. He maintained that all meaningful knowledge is knowledge of structure. Structure he defined as a bundle of relations. And if one asks relations among what, the reply, I think, would have to be relations among events, which ultimately must consist of matter and energy interactions.

The events governing behavior, Korzybski held, occur within the organism, the most important of such events being the activities of nerve cells. These events are determined by the instantaneous "structure" of the nervous system and themselves cause changes in that structure (say the distribution of energies and ion concentrations throughout the system). All "mental" and "emotional" phenomena, subjective feelings, evaluations, thought, desires, etc., are reflected in these events. In particular, our use of language, too, influences the functional structure of the nervous system and thus has profound influence on our perceptions, evaluations, "drives," the total personality.

Thus Korzybski clung to the "materialist" view, that is, to the principle of psycho-physical parallelism. For this reason, although in the minds of most people general semanticists seemed largely preoccupied with language analysis, semantics, and philosophy of science, Korzybski kept maintaining that general semantics has nothing to do with these linguistic disciplines but was an "empirical science," something like physiology.

Most of you are familiar with my evaluation of this claim of Korzybski's. I acknowledged that the center of interest in general semantics, in contrast to that of semantics and philosophy, lay not in what people do with or to

language but with what language does to people. If there *were* a science which would study these effects on the physiological level, such a science would be called "neuro-linguistics." In fact, Korzybski used the term "neuro-linguistic" profusely. But I also maintained that at the present state of knowledge, neuro-linguistics is at best only a projected science. The "discovery" of neuro-linguistics may be as important as the discovery of America, but the status of that discovery is about on the level of the status of the discovery of America in 1500. We know the continent is there all right, but we know next to nothing about it.

Such were my views when I first came into contact with the new behavioral sciences about two years ago. What I discovered next was that there were quite a number of other projected sciences, like neuro-linguistics. For example, I found that anthropologists were trying hard to apply psychoanalytic notions in their attempts to construct coherent pictures of cultures. They were trying to create a psychoanalytic cultural anthropology. I found economists playing with the mathematical theory of games in an attempt to develop a rational method of deducing economic behavior. I also recalled that in days gone by there were several other brave attempts to fuse disciplines, some successful, others promising, still others barren. As usual, most of the successes were in physical science or on the borderland between the physical and the biological (physical chemistry, biochemistry, biophysics, physiological genetics). Among the promising attempts one can count Marx's fusion of history, sociology, and economics, particularly his theory of the sociology of knowledge (later developed by Mannheim), a sort of social counterpart of psychoanalysis. Among the total failures are phrenology (an attempt to find physical location for "mental faculties") and the early attempts to construct a "social physics" (there was one in the 17th century).

As I say, I had been aware of all these attempts to explore the border areas where two or more disciplines overlap. But the program of the behavioral scientists seems to hold much more definite promise. The promise is in the conviction cherished by modern behavioral scientists who are committed to a program of unification that the exploration of the border areas requires a *non-commitment* to a particular frame of conceptual organization. These people have explicitly recognized the necessity of loosening their conceptual loyalties. By a process of self-selection, their ranks have been filled by individuals who either did not have too strong conceptual loyalties to begin with (too young to acquire them) or who have succeeded in severing their intellectual umbilical cords. They forgot the lessons of their respective Important Books.

Even though the day has not yet arrived when the lion lies down with the lamb and though the day when an Eastern and a Western diplomat can engage in a give-and-take discussion is only timidly dawning, I have actually seen a

hard-headed physical scientist, operationally and extensionally and positivistically oriented, *actively* listening (without heckling) to an attempt by a sociologist to define terms like "social system" or "social role" without an extensional referent in sight. I have also seen anthropologists sincerely trying to follow a mathematical derivation, even though it must have seemed to them a prodigious waste of intellectual effort to discover something as trivial as a formula for the propagation of fashions and even that formula applicable only to "idealized" populations with no assurance of pertinence to real ones.

PATIENCE and tolerance among people of different methodological convictions does not come easy in the behavioral sciences. The differences are deep and have strong emotional roots. There are many cleavages. I will mention only one or two. We have two parties, which can perhaps be called the positivists and the intuitionists. The positivists (to which I also belong) want to follow in the footsteps of the physical sciences. That is not to say that they are so naive as the Man from Mars, who wanted to get at the physically measurable observables at all costs. But they still have enough loyalty to positivistically-oriented physical science to want to deal with observables—any kind of observables, so long as they are recognized as such. For example, a given set of answers to a question, all distinct but all with an ascertainable "meaning" is an observable. If the question in a poll is "Have you heard of Joe McCarthy?" any answer that implies "Yes" may be counted as "Yes" and thus identified as an observable. The answer may be "Yes, I have heard of him." Or "Why that . . . " The sounds, the associated blood pressures, and other physical characteristics of the answers may be widely different; but since both imply that the person has heard of McCarthy, they contain an *invariant* which is independently inferred—hence, for all practical purposes, an observable.

Now such observables are far removed from the instrument readings of physical science. Nevertheless the positivistically-oriented behavioral scientist is willing to deal with them. To him they are data. The concession, then, that the positivist makes is that he will accept as an "observable" any datum on which there is independent agreement at least among properly trained observers.

He keeps his positivistic bias in that he wants to treat these data as the physicist treats his. He wants to collect them, sort them, quantify them, correlate them. He wants to state theorems, logically or mathematically proved, to make predictions on the basis of the theorems, to test these predictions against carefully designed, objectively verifiable observations. At all times, his primary loyalty is to his observables. He wants at all times to know what he is talking about.

Now he can hope to do all this only if his data are manageable. The variables must not be too many. If there are too many variables in a natural situation (as there always are in situations involving behavior) the positivistically-

oriented behavioral scientist will design an artificial situation in which many of the variables will be deliberately held constant. In other words, the positivist in behavioral science, like his cousin the physicist, relies heavily on *controlled* experiment.

CONTROLLED experiments in human behavior of individuals and groups are now a common occurrence. I will mention some of the more familiar ones. Alex Bavelas at the Massachusetts Institute of Technology designed experiments to determine how the pattern of communication channels in a small group influences their efficiency in solving a problem collectively. In order to make the data manageable, the siuation had to be drastically simplified. All groups consisted of five people selected from a rather homogeneous population. All problems to be solved by these groups were trivial, like distributing a simple piece of information among all the members. In other words, as many variables as possible were kept constant. The only thing that was deliberately varied was the communication structure of the group, that is, the rules governing who could communicate with whom. The results were quite interesting. Each pattern of communication channels gave rise to its own problem-solving pattern. The rapidity with which the problem was solved, the rate if improvement with the repetitions of the task, the flexibility of the group in re-adjusting to a new problem were all shown to depend characteristically on the group's communication structure.

Other controlled experiments with collective behavior were performed at the Washington Public Opinion Laboratory. Some of these concerned the spread of a piece of information through a population by personal contact. Others showed the magnitude of the reaction of a population to some controllable outside stimulus, for example airplane-dropped leaflets which the people were asked to mail in. It was shown that the number of leaflets mailed in plotted against the number dropped showed a smooth curve which could be described by a mathematical equation. The relative mail-in responses showed a definite dependence on the kind of appeal used. For example, one set of leaflets appealed to "patriotism" (the Air Force is conducting an experiment important for civil defense—won't you cooperate?); another set offered a dollar for every leaflet mailed in; another appealed to the importance of a purely scientific experiment, etc. There was a consistent gradation of response to all these appeals. Such are some results of attempts to obtain objectively verifiable data of characteristically human behavior well above the purely physiological or reflex level. Many other examples come to mind: Charles Morris' empirical study of value systems; Festinger's experiments with decision-making groups; Chapple's experiments on interaction in interview situations, etc. All these are attempts to systematize observation, experiment, and theory of complex behavior (especially social behavior), in terms of a firm, positivistic outlook.

LET US now see what the intuitionist's attitude toward such endeavors has been. The intuitionist has tended to dismiss the efforts of the nose counters, the poll-takers, the designers of controlled experiments, and the statisticians as irrelevant to understanding human behavior. To him, counting the number of leaflets picked up is hardly different from counting the leaves of a tree or the number of semicolons in the collected works of Shakespeare. The intuitionist maintains that no matter how painstakingly such data are collected and analyzed, they tell us no more about what is really important in human behavior than the number of semicolons tells us about the motivations of a Hamlet, an Iago or a Shylock. The intuitionist maintains that the data pertinent to behavioral science are of an entirely different order from the traditional observables of physical science and that therefore the techniques of controlled experiment and systems of mathematical deduction are entirely inapplicable to them.

This attitude is, I believe, behind the continued resistance of many psychotherapists against attempts to seek out operational definitions for the traditional Freudian, Jungian, etc., concepts of personality dynamics. Many cultural anthropologists also share this feeling. They feel themselves more akin to the great poets and novelists than to positivistic scientists. Some go so far as to say that whatever is describable in simple observables and predictable in human behavior is not worth bothering with, the really significant aspects being by their nature too profound for simple analysis, prediction, or control.

Here we have two seemingly irreconcilable attitudes. A barrier separates two approaches to cognition, two different ways of abstracting, the analytical and the organismic. The one seeks to break up reality into simple components, elementary entities connected by well-defined relations. The other seeks to recognize wholes, to perceive the "heart and soul" of a phenomenon. Traditionally the adherents of one view accused those of the other of vagueness, and the others return the accusation with the epithet of triviality.

THE ORIENTATION of the new behavioral sciences brings a hope that the exponents of these diametrically opposed points of view may somehow find a common language. Some attempts in this direction are courageous and praiseworthy. As an example I may mention the remarkable essay by Else Frenkel-Brunswick, "Psychoanalysis and the Unity of Science." The essay is written from the point of view of the psychoanalyst (who, in the eyes of strictly positivistic behaviorists is often considered to be a metaphysics-monger) and is directed at the positivists. Dr. Frenkel-Brunswick is well qualified as an interlocutor, being both a psychologist and a student of Moritz Schlick, one of the members of the Vienna Circle of logical positivists whose ideas on the philosophy of language bear a close affinity to those of general semanticists. Characteristically, the first section of the essay is entitled "The Broadening of Operationism." The broadened base of operationism may be likened

to a liberalized system of credit in an expanding economy. Complicated business procedures are not possible if every credit certificate is immediately presented for cash payment. Similarly, extensive development of scientific concepts is impossible if strictly operational or even extensional definitions are constantly demanded. Dr. Brunswick quotes Einstein, a foremost operationist: "In order that thinking might not degenerate into metaphysics or empty talk, it is only necessary that enough propositions of the conceptual system be firmly enough connected with sensory experience." Note that Einstein does not say *all* propositions. He says only *enough*. Later Dr. Brunswick quotes Otto Neurath, an exponent of the Vienna school: ". . . one can love exactness and nevertheless consciously tolerate a certain amount of vagueness . . . new ideas of scientific importance start mostly with vague and sometimes queer explanations."

The important word in this quotation is "consciously." Consciousness of vagueness makes the toleration of vagueness safe. Compare this with the emphasis on consciousness of abstracting emphasized in general semantics: the map is not the territory. As long as you remember that the map is not the territory, you are fairly safe in navigating by the map. It is not too well known to those who believe that Freud became lost in metaphysical fog (and to those who do not mind being lost in metaphysical fog) that Freud was always conscious of the tenuousness of his speculations, that he was constantly striving to establish a firm empirical basis for his concepts and hypotheses, that he, in fact, not only built magnificent castles in the air but also started to build a foundation, hoping that others would continue with *that work*, hoping that eventually physiology would supplant psychology. Dr. Brunswick points all these things out.

SHE SPEAKS the language of the biologist when she compares the overt, observable personality pattern to a *phenotype*. In biology, "phenotype" refers to the overt appearance of an organism with regard to certain genetically transmissible characters. But beyond the phenotype, deep within the nuclei of every one of the cells of that organism is an aggregate of genes, units of inheritance. They constitute the *genotype*, the hereditary *potentialities* of the individual. Two different genotypes may give rise to the same phenotype, but their progenies may be widely different. Calling the observable personality the "phenotype" implies that behind the surface behavior patterns there may be the analog of the genotype, the psychological potentialities of the individual, of which the overt personality may be only a mask which may suddenly come off and reveal the "genotype." This is admittedly argument by analogy. However, Dr. Brunswick's essay does not set out to prove anything, least of all conclusively. It merely points out that the basic concepts of psychoanalysis, far from being metaphysically oriented, have counterparts in firmly established branches of science.

Dr. Brunswick goes on to explain *in the language of logical analysis* (that

is, the language of modern philosophy of science forged by Carnap, Frank, Feigl, etc.) the status of psychoanalytic concepts. She reminds those who clamor for immediate experimental verification of psychoanalytic hypotheses that in modern physics the translation of theory into experimental verification is *itself a major theoretical problem* and constitutes a great part of theory. A prodigious achievement in Einstein's general relativity theory, for example, is precisely that deductive argument which leads to the conclusions about what phenomena ought to be observed in order to test the theory.

She points out that experimental verifications have to some degree been carried out in confirmation of such psychoanalytic concepts as fixation, regression, repression, and projection. She shows how the "intuitive" judgments, on which clinicians so strongly depend, can be objectivized, even though objective referents are not definable, by statistical correlations with each other. Dr. Brunswick's paper is a model attempt to bridge the gap separating the experimentalist from the clinician, the hard-headed positivist from the self-contained intuitionist, the dissector from the holist.

I WOULD LIKE to mention one other example of such "bridge-building." It seems to a positivist who reads Oswald Spengler's *Decline of the West* that his speculations on the "soul" of a civilization are strictly for metaphysicists. Spengler makes a bold claim, however, which implies that his system has predictive value. He says in effect that if some creative activity of an unknown civilization were known to him, say its music or its mathematics, he could from this knowledge infer the character of other parts of the profile, for example the jurisprudence or cosmology. With Spengler this was only a boast. I hear now that a young man of twenty-three, Kimball Young, has just written a doctor's thesis in which he reconstructs a certain Indian culture from its language alone, much as a detective draws a portrait of the criminal from clues or as a biologist reconstructs an extinct animal from a few bones, and that, furthermore, the reconstruction has been amply corroborated by historical and anthropological evidence. It is too bad that Benjamin Lee Whorf did not live to see this triumph of his brilliant conjectures.

The bridge is also being built from the other side, that is, from the positivists to the intuitionists. The principle communication difficulty to be overcome by the mathematically-dedicated, controlled-experiment-oriented students of behavior is to convince their opponents that in spite of their seeming triviality the quantitatively measurable and manageable data with which they deal may nevertheless be of fundamental importance. If they find a sympathetic ear, they too, like Dr. Brunswick, can appeal to analogy. Against the background of Aristotle's all-embracing "physics," the experiments of Galileo appeared trivial. Possibly Schelling, the author of a monumental work on "natural philosophy" (now completely forgotten) would have thought that

Faraday's induction coils were properly classified with toys. So must the miniature experiments of Pavlov in Leningrad and of Bavelas at the Massachusetts Institute of Technology and of Bush at Harvard must appear as inconsequential in the light of the tremendous and pressing problems of individual and social behavior. If, however, those who want to fathom the human soul will have some patience with those who wish to build an experimentally rooted behavioral science from the bottom up (and if the latter reciprocate), a common language may yet arise and the construction of the Science of Man will have begun.

KORZYBSKI'S VISION was a science of man. It was to be non-aristotelian (that is, structural rather than metaphysical or, plainly speaking, scientific). It was to be non-elementalistic (that is, it was to treat the organism-as-a-whole-in-environment). It was to be the foundation of man's mental health (through self-knowledge and extensional orientation). The task of constructing such a science is easier written about than done, although the writing must have been none too easy. (One sometimes wonders whether the reading of *Science and Sanity* is not more difficult than the writing must have been.) The new behavioral sciences represent the doing.

We have seen that the first big problems the behavioral scientists encountered were precisely those that Korzybski put in the forefront, the problems of communication. When A talks to B, A has his abstractions in his mind and B his. As long as they are talking about the weather, their abstractions are sufficiently similar and no serious obstacles arise. But once they start talking methodology, the conceptual loyalties begin to tug at their mental coat tails. What is important, meticulous description or profound insight? Observation must be systematic, warns A. You kill to dissect, B accuses, quoting Wordsworth.

There comes a time when the two-valued orientation gets outgrown. The new behavioral sciences have room both for structural and for non-elementalistic approaches. The Important Book in the mind of each specialist had been telling him that the "important thing" about man is that he has "habits," or that he is motivated by "drives," or that he is isomorphic to a digital computer, or that he is a point on a sociogram. The new behavioral scientist is discarding that book. He is learning "The Friendly Book," whose version for two-year-olds says: "I like trains—short trains, long trains, freight trains, passenger trains, trains that cross the plains, trains that go clickety-clack." There is nothing in The Friendly Book about the Important Thing about trains. The Important Thing (like going places) will emerge in due time, but it will emerge from extensional experience and from friendly exchange of experience, not from being told. The six blind men, having learned to listen to each others' impressions, are beginning to recognize their blindness. Perhaps the picture of the elephant will emerge after all.

☆ DISCUSSION ☆

"LAISSEZ-FAIRE" OR "ANARCHY" IN LEADERSHIP?

C. G. BROWNE *

BECAUSE the research of Kurt Lewin and his associates into group dynamics and problems of leadership remains important and influential, I wish to discuss here a question raised by one of their key terms, "laissez-faire." The term was first introduced, in the sense in which it is currently used in leadership studies, in a paper published in 1939 by Lewin, Ronald Lippitt, and R. K. White, "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates.' "[1] This paper described the different effects on groups (in this instance, boys' clubs) of three different "social climates" created by different techniques of leadership. These techniques of leadership were called Autocratic, Democratic, and "Laissez-faire."[2] Later, Lewin further discussed the three leadership procedures and introduced the use of an equilateral triangle to diagram the relationships between these concepts.[3]

The characteristics of the three types of leadership were: *autocratic*—determination of policy and dictation of work tasks by the leader, no group decisions; the leader was personal in his praise and criticism, but remained aloof from the group; *democratic*—all policies a matter of group decision with leader partici-

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[1] Kurt Lewin, Ronald Lippitt, and R. K. White, "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates,' " *Journal of Abnormal and Social Psychology, Society for the Psychological Study of Social Issues Bulletin*, X (1939), pp. 271-299.

[2] Throughout the article, quotation marks will be used when discussing "laissez-faire" as Lewin, Lippitt, and White structured it, but quotation marks will not be used when laissez-faire is discussed in its "proper" structural framework.

[3] Kurt Lewin, "The Dynamics of Group Action," *Educational Leadership*, I (1944), pp. 195-200.

pation, members worked with whom they wished and the group determined division of tasks, leader was objective in his praise and criticism and participated in group activities as seemed appropriate; *"laissez-faire"*—complete freedom of group or individual decision without leader participation, leader supplied materials but participated only when asked, leader made infrequent comments on member activities and made no attempt to interfere with or participate in the course of events.

Frame of Reference

THE TERMS Autocracy and Democracy refer to types of political systems with certain fairly well-defined characteristics. The descriptions of autocratic and democratic leadership used first by Lewin, Lippitt, and White coincide very well with leadership as it is characterized in the two political systems. However, the situation proves to be different in the case of the term "laissez-faire," which leaves the political frame of reference from which the other two terms are taken. Laissez-faire is not a political system; it is a set of principles or policies which may operate *within any* political system.

The laissez-faire concept developed from the discussions of Adam Smith in his *Wealth of Nations* and in brief it refers to a control relationship which exists between government and national activities. It is important to note, however, that government is present, that laissez-faire in no way implies a lack of governmental structure or any lack of active operation of this structure. Neither does it imply any lack of leadership. Smith advocated less governmental activity and so proposed to move away from Autocracy, but at no time did he advocate an elimination either of government or of a minimum of necessary governmental controls.

Furthermore, although Lewin and his associates define their concept of "laissez-faire" in terms of behavior, their definition is not in accord with what people ordinarily understand it to mean. The structure of laissez-faire to most people refers to a condition of maximum personal freedom, but in most thinking, it does not in any way imply a lack of leadership. And it should not imply any lack of leadership. Actually, maximum personal freedom for any individual is to be found in a Democracy, both in the political meaning and in Lewin's leadership group dynamics settings. The conditions of Lewin's third leadership situation are best described by the term "Anarchy."

It appears probable that Lewin, Lippitt, and White recognized the discrepancy between the commonly understood meaning of laissez-faire and their own specialized meaning, since in the first article (1939) the term consistently was italicized or placed in quotation marks. However, the use of either cautionary device was discontinued in the second article (1944). While it is granted that an author may use any term he chooses for any concept or operation providing he explains clearly what definition he is using, this is unwise semantic practice

when the term already has a pre-established meaning, and particularly unwise when another term with an established meaning can be used to define the operations under consideration.

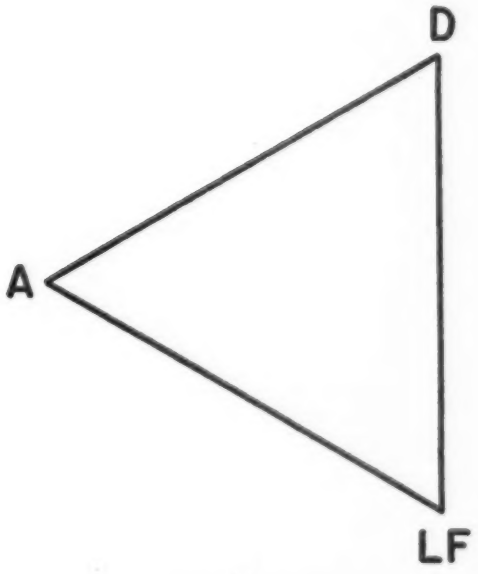
Perhaps it is clear at this point why the term which should have been used to describe the third leadership condition is Anarchy. The substitution of Anarchy for "laissez-faire" would eliminate two errors: (1) Anarchy refers to a political system and therefore is in a common frame of reference with Autocracy and Democracy; (2) the general characteristics of Anarchy as a political system are in close agreement with the characteristics of Lewin's third leadership situation. Neither of these conditions can be applied to laissez-faire.

Lewin's Triangle

In his 1944 article, Lewin introduced his triangle concept to represent the autocracy, democracy, and "laissez-faire" leadership situations (Figure 1). He stated that the three concepts properly are represented as a triangle and that the concept of discipline or leadership lying in a continuum is basically incorrect.

Figure 1

Lewin's Triangle



He failed, however, to give any heading or title to his triangle, but identified it only as follows: "Fig. 1. The relations of similarity and difference between Autocracy (A), Democracy (D) and Laissez Faire (LF) cannot be represented by one continuum." It is granted here that all of the similarities and differences between the three concepts cannot be represented in any single continuum. On the other hand, it appears equally true that all of the similarities and differences cannot be represented in a triangle.

By its nature, the points of an equilateral triangle are equidistant and therefore the diagrammatic representations at each of the three points become equidistant.[4] In one place, Lewin defined "laissez-faire" as individualistic freedom. Yet not even on the basis of his own descriptions of A, D, and "LF" is the individualistic freedom of "LF" equidistant from the individualistic freedom represented in his A and D. Or it might be restated that if "LF" is individualistic freedom, then on an equilateral triangle, A and D must share equality of individualistic freedom. Obviously this is not the case, and Lewin granted that it is not since he pointed up the greater presence of freedom for group members in D and "LF" than in A. To take it further, it is difficult to conceive of any dimensions on which Autocracy, Democracy, and "laissez-faire" would be equidistant. Nor is it easier to conceive of these equidistant dimensions if the preferable term Anarchy is substituted for "laissez-faire." Lewin seemed to recognize this, although he did not say it, since he discussed the similarity between A and D and between D and "LF," but did not indicate any similarity between A and "LF."

A Continuum

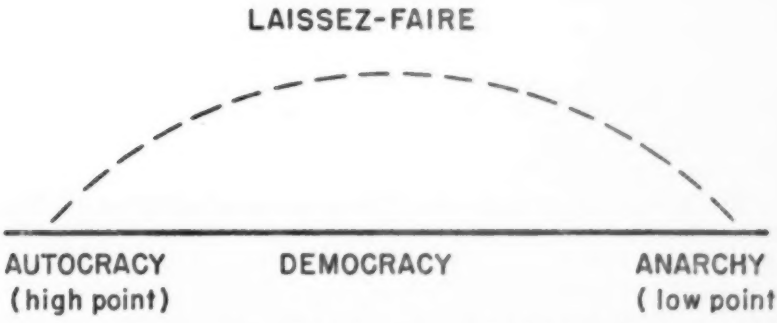
From the foregoing, it would appear that a continuum, based upon some single dimension, is needed to diagram the three leadership conditions as Lewin defined them, and that it would be desirable to include laissez-faire, properly considered, in the diagram. It is proposed that Figure 2 meets these requirements. Autocracy, Democracy and Anarchy represent three concepts in a single frame of reference, namely, all refer to political systems with fairly well-defined characteristics. The dimension which Lewin was most interested in can be termed "leader group control" and forms the basis for the present continuum, with the extreme high in Autocracy, the extreme low in Anarchy, and the middle in Democracy. This conforms very well with the operation of this dimension of leader group control in both the political systems to which it refers and in Lewin's discussions of the three leadership situations. In terms of leadership, then, a group may be evaluated for leader group control and

[4]Lewin's triangle was equilateral. Although he did not specify that the equilateral triangle is necessary, he offered no discussion of triangles of any other dimensions. It is assumed, therefore, that his discussion refers only to triangles with the equilateral characteristic which he illustrated.

the evaluation can be represented as some given point on the continuum. Should this variable in the group change or be changed experimentally, the representation on the continuum also would change, with the possibility of reaching Anarchy if leader group control is relaxed to an extreme or of reaching Autocracy if leader group control is increased to an extreme. Obviously, various dimensions also might be applied to the continuum as represented in Figure 2. On the other hand, there may be dimensions of both leadership and political systems which, although they may represent continua of Autocracy, Democracy, and Anarchy, in diagramming would necessitate a rearrangement of the three concepts on the continuum scale. However, this is unavoidable, but under no circumstances is the problem answered with a triangle which represents no single dimension.

Figure 2

Continuum of
Leader Group Control
with Laissez-faire as a Variable



Laissez-faire properly considered as a control relationship between government and national activities or between leader and group is represented in Figure 2 as a curve over the continuum of leader group control. Translated literally the French *laissez-faire* means "allow to do." In the political sense, it is translated more freely as "government, leave them alone," referring to activities external to government. In the leadership sense, it would become "leader, leave them alone," referring to the group. Politically, however, government is present and functions with a minimum of controls which from time to time may be defined in terms of social good and accomplishment. Thus also,

when laissez-faire is applied to leadership, leaders are present, but they must be functioning as leaders, not as figure-heads, and the controls they exercise must also be present and directed toward group goals and the accomplishment of them.

The laissez-faire curve in Figure 2 represents these relationships as related to the continuum of leader group control. In Autocracy, government and leaders are present, but the authority of national activities or the group has been eliminated so that laissez-faire is at a minimum. In Anarchy, government and leaders in any organized sense are not present or they are not functioning since their authority has been eliminated. Therefore, again laissez-faire is at a minimum, since the relationship between the individual and government is necessary for a laissez-faire condition. It might further be pointed out that individual freedom in Anarchy is at a minimum since the freedom of any individual is subject to the restrictions imposed by all other individuals and there are no established regulations which guard and protect the individual in his freedom of activity. In Democracy, however, the middle range of the leader group control continuum, both government and leaders are present, their authority has not been eliminated, but neither has the authority of national activities or the group been eliminated. Therefore, laissez-faire operates at its maximum in Democracy as an expression of the control interaction between government and national activities or between leader and group.

LINES COMPOSED QUITE A FEW MILES FROM TIN PAN ALLEY

MAURICE A. CRANE *

A STUDENT once told me that *Othello* was a first-rate play because it dealt with the very important subject of race relations. He was a smart kid, and I think he really liked the play and perhaps even understood that it was not about race relations at all, but that having made a value-judgment about art he was embarrassed and sought support from the more *realistic* scale of social usefulness. In an age so given to the worship of science that some of the most humane of scholarly researchers choose to call themselves scientists or social scientists, this snare of wanting a tangible measurement as a basis for all value judgments lies before all of us, and sometimes traps some of our best thinkers.

Dr. Hayakawa's attempt to prove that Negro blues are more realistic and

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more socially desirable than the output of Tin Pan Alley is a case in point.[1] The article is scientific rather than humane, and is not hampered by the complex consideration of musical values. But the laboratory purity is early upset: once the facts are gathered they are forced into the Procrustean bed of Wendell Johnson's "Idealization-Frustration-Demoralization" formula, which Dr. Hayakawa most unscientifically accepts without question. Against the IFD scale, taken *a priori*, Dr. Hayakawa measures seventeen Tin Pan Alley-type popular songs and finds them sociologically inferior to fifteen Negro blues tunes.

We must allow the scientist some limits. Surely we cannot expect him to sample all of the hundreds of thousands of "predominantly white" popular songs that have appeared in the last four decades. Some limit must be set, and since this is a short article, Dr. Hayakawa chooses the number seventeen. They are, in order of appearance in the study, "My Ideal," "The Man I Love," "My Heart Stood Still," "You Were Meant For Me," "Blue Room," "My Blue Heaven," "Looking At The World Through Rose-Colored Glasses," "All Alone," "You Were Only Fooling," "Somebody Else Is Taking My Place," "I'm All Alone Because I Love You," "Am I Blue," "Have You Ever Been Lonely," "I Need You Now," "I'll Never Smile Again," "I'm Gonna Lock My Heart," and "Paper Doll." Now, it is not reasonable to expect that seventeen songs will be absolutely typical of several hundred thousand (the possibility is never considered in the article), and we must be content with certain omissions. Is Cole Porter not represented? Let us be thankful for Larry Fotine. If the prolific Jerome Kern is missing, we can solace ourselves with Ruth Lowe, who wrote one song.

While scholars in English Literature or Music would concentrate on the output of the most influential composers, that is not the only principle of selection open to scientific research. The popularity of the individual song suggests itself. Were all seventeen of these songs equally popular? No. Well, were they all somewhere on someone's hit parade at some time? No. Perhaps chronology, the limit frequently imposed even by the most unscientific historians, holds a clue. One song is from the 'teens, eight from the twenties, five from the thirties, two from the forties, and one from the fifties. Any reader who wants to make a pattern from that is welcome to try.

It would not be unreasonable to suspect that in an elite selection of the great body of writing produced by popular tunesmiths, picked to illustrate a study which assumes the validity of the IFD formula, there might be a song or two which illustrates the formula within itself. The very least scientific of all humanists would not piece together parts of poems written by different poets on different subjects at different times for different reasons and try to discover in them a usable plot. The schoolboys who jokingly recite nonsense like

[1] S. I. Hayakawa, "Popular Songs *vs.* The Facts of Life," *ETC.*, XII, 83-95 (Winter 1955). Mr. Crane's article is the first of several replies to Dr. Hayakawa's article received by the Editors; other replies and comments will be published in subsequent issues.

A thing of beauty is a joy forever
It fell to earth I know not where
Sail on O Union strong and great
A host of golden daffodils

never make the mistake of searching the quatrain for organic unity. But, alas, from all of American popular music, there is no single song which can illustrate the IFD formula.

IFD is not inherent in the output of Tin Pan Alley. It must be forcibly superimposed by someone momentarily blinded by devotion to the theory and deafened to thousands of popular songs. Was any reader of the Hayakawa piece so unfamiliar with American popular music that he couldn't think of an opposite for every sentiment quoted?

YES, there's a girl who wonders *"if she'll ever find the boy in her mind, the one who is her ideal,"* but, in the bunk beneath her a girl dreams of *"someone to watch over her . . . . who may not be the boy some girls think of as handsome." "Maybe Tuesday will be the good news day for the girl who wants a man . . . to come along, who'll be big and strong," "but, many's the girl who's content with her Bill," "an ordinary guy"* even though she can't explain (*"It's surely not his brain"*) what attracts her. And for every juke-box-educated male who idealizes his girlfriend, another has been taught to think in these terms: *"It's not that you're attractive, but, O, my heart grew active when you stepped into view"; "Is your chin a little weak? Is your figure less than Greek?" "I'm looking for an angel, but angels are so few, so until the day that one comes along, I'll string along with you."* If this is idealization it is extremely disingenuous.

If there is a frustrated young American who believes that somewhere there is someone whose one look can make his heart stand still (as Shakespeare believed long before Rodgers and Hart), there's another who sings of his vegetable love for *"the girl next door."* And those who believe in the predestined cosmic plan whereby *"the angels must have sent you and they meant you for me"* cannot exceed in number those who sing about the *"fellow waiting in Poughkeepsie"* who's going to have to keep waiting, or *"when I'm not near the girl I love, I love the girl I'm near."*

For some, marriage may mean the "happily-ever-after" world of the *"blue room for two room where every day's a holiday,"* but for others it leads to *"the cottage small upon the hill where every day I have to pay another bill,"* where after a year Galahad is *"washing dishes and baby clothes,"* because, as the songwriter has forewarned him, with laudable social conscience, *"that's what you get, folks, for makin' whoopee."*

The person raised in the juke-box tradition is more likely to be frustrated and demoralized than the person raised in the blues tradition, according to the

Hayakawa thesis. To illustrate this point, fifteen blues selections (three of them most certainly not blues by any definition commonly used by jazzmen) [1] are cited. It is pointed out that in the vicarious courtship gained through song, the child raised in the blues tradition is exposed to more of the realities which will appear when his own mating season begins. He can see that the basis of love is sexual, or economic, that women are fickle, that men are brutal, and that both grow impotent, or sloppy, or both. When he discovers that the real thing turns out to be less frightening than the advertisement, he has apparently made a better adjustment than the young lover who finds things just the other way around.

DR. HAYAKAWA'S article was depressing to the jazz fan, to the humanist, and, I guess, to the scientist. It removed the emphasis from good and bad music and good and bad lyrics and placed a disproportionate value on social usefulness. Quite obviously it was random and wildly unscientific as well as unconcerned with esthetics. In this article we momentarily lost a humanist without gaining a scientist. And worst of all, Dr. Hayakawa didn't prove anything.

[1] Hayakawa acknowledges that one of these, "Good Man is Hard to Find," was not written by a Negro and is not "strictly speaking" a blues, leaving the reader to guess whether or not there is a connection between these two facts. He makes the lyrics honorary blues, however, because Bessie Smith, a blues singer, gave them a "famous rendition." We need follow this line of reasoning no further than Maxine Sullivan's famous rendition of "Loch Lomond" to recognize its value.

✡ CORRESPONDENCE ✡

A Note on the Cheshire-Cat

SIRS: Several times Alfred Korzybski wrote warnings against the uncritical use of $\frac{\text{over}}{\text{under}}$ defined terms, which he explained "are over-defined (over-limited) by intension, or verbal definition, because of our *belief* in the definition; and are hopelessly under-defined by extension or facts, when generalizations become merely hypothetical." As examples he cited euclidean parallels and newtonian equations, as well as some illustrations drawn from everyday life. One of these contrasted a verbal definition of a house with an extensional house which might be infested with termites, and another posed the paradox of a barber in a small town who shaved only those who did not shave themselves, the point being that if he shaved himself he did not shave himself, and vice versa.[1]

Korzybski might have used an amusing passage from *Alice in Wonderland*, Chapter VIII, as another example of $\frac{\text{over}}{\text{under}}$ definition. Alice had made friends with a Cheshire-Cat, which possessed the peculiar ability to make itself visible or invisible at will. It used to flicker abruptly in or out of sight, a habit which made Alice giddy. At her request, the Cat took to joining her company gradually, beginning at one end or the other (creeping socialism). When Alice attended the croquet party put on by the Queen of Hearts, the Cat started to appear head first, but did not finish the process. Alice and the King of Hearts talked for a short time with the head of the Cat. Presently the Queen ordered the Cat beheaded. Alice left to play croquet, and the story continued:

> When she got back to the Cheshire-Cat, she was surprised to find quite a large crowd collected round it: there was a dispute going on between the executioner, the King, and the Queen, who were all talking at once. . . .
>
> The executioner's argument was, that you couldn't cut off a head unless there was a body to cut it off from: that he had never had to do such a thing before, and he wasn't going to begin at *his* time of life.
>
> The King's argument was that anything that had a head could be beheaded, and that you weren't to talk nonsense. . . .

[1] "Introduction to the Second Edition," *Science and Sanity* (Lancaster, Pennsylvania, 1941), pp. xxxii-xxxviii. For more detailed discussions, see Korzybski's papers cited in the note on p. xxxvii.

THESE arguments imply an intensional over-definition of the term *to behead*; the executioner and the King tacitly agree that it means something like *to cut the head off something*. But the special problem posed is this: must the head be on something in order to be cut off? The executioner argues yes; the King argues no. Intensionally, there is no way to resolve the dispute. An extensional resolution would be possible; they could try cutting off the head, and see what happened. But since no extensional approach was tried, the term *to behead* remains under-defined in an extensional sense, and no amount of verbalism can define its value for this extensional situation.

LEW GIRDLER

Department of English, San Jose State College

Communication from "Sprachforum"

SIRS: This is to call the attention of the Editors of *ETC.* and members of the International Society for General Semantics to *Sprachforum: Zeitschrift für angewandte Sprachwissenschaft* (Journal of Applied Linguistics), first published a few months ago. The first issue was sent to you through our publishers, Böhlau-Verlag, Köln, last week. I do not have the least doubt but that you and your Society will be seriously interested in this periodical, since the aims of our work over here coincide to a large extent with what you have been working on for all these years. We should, therefore, be extremely happy if you would be willing to take up contact with us over here.

The idea of general semantics was first brought home to me a few years ago by Mr. Warren M. Robbins, then Education Officer in Germany, and by Dr. Hugo Fischer, Aachen, who has drawn attention to semantics by means of an article in *Studium Generale*, a German scientific periodical of broad scope. Some of the American writings on general semantics came into our reach and were quoted in an article of mine for *Wirkendes Wort* as well as in the first issue of *Sprachforum* at your hand.

In my opinion, general semantics as conceived by you and applied linguistics as conceived by us have many things in common: first, the close attention to any language problems of relevance to various spheres of daily life; secondly, the emphasis laid on the spiritual or semantic side of language. If there are any divergencies between general semantics and applied linguistics, this will certainly do no harm, but rather seems an excellent chance for mutual help and the complementing of each other's efforts.

This letter, then, is to invite your cooperation and to offer our own. (1) May we arrange an exchange of subscriptions? (2) We should like to invite members of ISGS to submit articles for possible publication in *Sprachforum*. The articles may be in English or German; if in English, they might be translated or published with an appended German summary. (3) Would *ETC.* be inter-

ested in articles on recent developments in German linguistics, especially the applied branch? Let me close this letter with all good wishes, hoping soon to hear from you.

DR. GÜNTHER KANDLER

Bonn, Königstrasse 18, Western Germany

Reply to Dr. Kandler

DEAR DR. KANDLER: It is indeed a pleasure to hear from you. We are reading with interest and pleasure the issue of *Sprachforum* which has just arrived. We are delighted to know of your work in applied linguistics and to receive your kind offer of scholarly cooperation. It is a pleasure, too, to know of the work by Mr. Warren Robbins and Dr. Hugo Fischer in bringing together our related lines of endeavor.

(1) We are entering at once an exchange subscription to *ETC.* for you, and sending also a selection of back issues.

(2) We shall indeed be happy to forward to you, for possible publication in *Sprachforum,* articles by members of ISGS which we feel might be of interest to you. Furthermore, if you happen to find articles in past issues of *ETC.* which you wish to reprint in *Sprachforum,* just let us know, and we shall be happy to grant the necessary permissions.

(3) We should indeed be interested in having articles on applied linguistics in *ETC.*

It is always a pleasure to establish a new channel of international intellectual cooperation. Our best wishes to you and to the future of *Sprachforum.*

S. I. HAYAKAWA

Advertising: Manipulative and Ethical

SIRS: It may be quite unnecessary for me to call to your attention Peter Drucker's latest book, *The Practice of Management,* but Dr. Rapoport's reply to Mr. Schwab's letter (ETC., XII [1954], 73-76) stimulates thought on one or two points which Mr. Drucker makes.

Our "capitalistic" system, as you well know, it not a static thing—profound changes are taking place in the thinking of many business leaders of the system. My observations—as a member of management and concerned with evaluating future prospects—lead me to believe that a growing number of business managers are moving away from the old notion that "in a capitalistic system, the chief, often the only, motivation for making and marketing products is profit." True, though an "adequate profit" is coming more and more to be regarded as

an essential "condition of survival" of an independent business in a "free enterprise system," it is no longer thought of as a "basic purpose." The *modus vivendi* requires managers to be "profit oriented," but a top manager who believes he has provided a significant and useful guide to his subordinates when he proclaims, "we are in business to make a profit," is a dodo without knowing it. The advice of a medical doctor: "you have to eat to stay alive," may occasionally be necessary for a disturbed patient. Similarly, a "disturbed" business may occasionally need a reminder of the function of profits in keeping a business going. Usually, however, such advice is not only superfluous but useless.

The business organization exists to satisfy human needs—those of business personnel, the individual consumers, the body politic, and the owners and shareholders. But these needs are irreconcilably in conflict if they are considered *only* in terms of profits. A business organization is an ordering of human resources; and while anthropomorphism regularly inflicts grave injuries to understanding, it may be helpful to think of a business enterprise as an organism for which profits are a minor but nonetheless essential element in nutrition. If one should decide that calories are the one and only need of the human body and thus concentrate on getting enough sugar—possibly the simplest source of calories—he would be behaving in a manner analogous to that of the management which conducts its business with *only* profits in mind.

As Mr. Drucker forcibly points out, the opposite error must also be avoided. Range of authority and responsibility can become over-extended. A business may claim a more dominant position in a complex society than it is entitled to. Not only may it interfere unduly with employees' private lives, it may create false expectations by claiming responsibilities broader than it can satisfactorily discharge. After all, even in a "business society," business is only one of the orderings of human resources and, possibly, in the long-pull, not the most influential.

So I wonder whether advertising people ought not to be directed by managers having not only broader responsibilities but broader vision. Isn't advertising, by its nature, a manipulative art? If so, will it not tend to transgress by seeking the simplest and "most effective" ways of gaining immediate goals without regard for what might be more fundamental? I have not thought deeply on this point, but I suspect that advertising is intrinsically incapable of self-policing. Can any manipulative art generate its own ethical controls? Our society, inevitably I suppose, has allowed its more proficient practitioners—those with the naturally excessive ebullience of the successful manipulator—to externalize their internal equation: "effective=good." The task, as I see it, is not that of changing the inevitable internal equation but, rather, reestablishing the ethical primacy of the external controllers.

J. W. DIBRELL

Camden, New Jersey

Comment by Rapoport

SIRS: There is no question that there has been a growing awareness of social responsibility in large sectors of management and that this awareness has raised questions about the goals of business organizations. However, some philosophical leverage is required to make such questions fruitful, and I find such leverage lacking whenever the existence of autonomous competing business units is justified *a priori* on the ground that they exist to satisfy human needs.

All human activities satisfy human "needs." Bureaucracies satisfy the needs of the bureaucrats and, to some extent, of the populations in which they flourish. Armies satisfy the needs of their officers and of the governments they support. Gangs satisfy the needs of their members and, to some extent, of newspaper publishers and ambitious state's attorneys. Nothing exists in human affairs without satisfying *someone's* needs. To endow a justification with an ethical significance, one must ask *what* needs are being satisfied—the implication being that ethics is legitimately concerned with assigning different importance to different needs.

The loyalty of most Americans is overwhelmingly committed to the present system of autonomous and competing business units. This loyalty seems to have strong anthropomorphic roots. The units are thought of as persons. Just as it seems improper in our culture to ask for a justification of a person's existence (his existence is valued as an end in itself), it also seems improper to inquire why autonomous business units should exist. Even in our law, the corporation is defined as a "person," though not a "natural" one. The right of business organizations to exist is taken for granted, and only their *modus vivendi* is open to ethical discussion: how much profit is proper; how much public pressure is proper; what are the correct relations to other organizations, etc.?

WHILE I have no doubt that given a progressive awareness of social responsibility concomitant with increasing maturation and sophistication—which seems now to be pervading the management class—some of these questions may receive "satisfactory" answers (that is, a code may be worked out for business so that it does not violate too grossly certain elementary standards of human decency), these answers cannot penetrate to the fundamental question: must the right to exist be as inalienably assigned to business organizations as it is to "natural persons?" Is it worthwhile to identify with the "needs" of business to such an extent that the above question seems impertinent?

Once one has asked the question and pondered on it, then the "ethics of advertising" seems a relatively shallow matter. How ethical can cigarette advertising become to justify the increase in smoking, for which it is probably largely responsible? I am not raising the question whether smoking is good or bad. This is probably a trivial matter. But a grotesque distortion of values

is not. I am referring to a recent meeting of tobacco manufacturers where a spokesman declared that there is every reason for optimism—since the smoking habit is so firmly entrenched that no cancer scare is likely to make an appreciable dent in it.

Ethics cannot significantly bear on the question of the role of business and of its voice, advertising, unless the whole question concerning the foundations of human values is raised. This question can be raised only in an atmosphere of detachment. This atmosphere is particularly difficult to achieve because of our commitments to accustomed ways of life.

ANATOL RAPOPORT

Agradabilissime Surprisa

SENIORES: Il esseva un agradabilissime surprisa de trovar in *ETC.* le discussion in Interlingua del essayos de Whorf como illos se applica a Interlingua. Il me surprenderea altemente, comocunque, si iste littera se approximava a un forma acceptabile, proque isto es mi prime essayo a componer un littera in Interlingua. Io pote leger Interlingua facilissimo; sed presentar mi pensatas clarmente es plus difficile.

Io debe explicar forsan que io non es studente de Interlingua. Un anno retro io subscribeva a *Scientia International*, le edition in Interlingua de *Science News Letter*. Io lo trova facile a leger e de valor como breve summario, economic de spatio, de *Science News Letter*. Subsequentemente io emeva e legeva *Interlingua a Prime Vista*, un introduction simplicissime a Interlingua. Io ha nunc le *Interlingua Grammar* e le *Interlingua-English Dictionary*. Io ha legite sed non ha studiate le grammatica e ha consultate le dictionario rarmente. Comocunque, durante que io scribe iste littera, io consulta ambe le libros multo frequentemente.

Il me pare que usar Interlingua in *ETC.* debe esser de valor pro le facile comprehension de lectores in Europa continental, Sud-America, e in altere paises ubi se parla la linguas non-anglese west-europee. Sin dubita, le lectores sin alicun comprehension de linguas non-anglese va haber difficultates a comprender Interlingua, sed lor difficultates debe esser minus que illos del justo-mentionate lectores in lor essayos a comprender le anglese usual. Il es etiam probabile que un grande majoritate del lectores regular de *ETC.* comprende, al minus un pauco, un o plure del linguas de Europa continental, del quales, juncto con anglese, Interlingua esseva extrahite. Proque, pro servir le propositos principal del Societate International de Semantica General, il es importante disseminar le ideas presentate in *ETC.* le plus extensemente possibile, io pensa que le utilisation de Interlingua, al minus de tempore a tempore, debe esser benefic.

D. B. THOMPSON

Ainsworth, Nebraska

DATES AND INDEXES

THE PAST YEAR has been an eventful one for the Editors of *ETC.* and for ISGS. Early in the spring of 1955 Russell F. W. Smith left the University of Chicago to become associate dean of the Division of General Education, New York University. In May came the deeply-lamented death of Irving J. Lee, a founder of ISGS, past president, and member of the Governing Board. In late June S. I. Hayakawa left Chicago to move to Mill Valley, California; in September he assumed the post of lecturer in language arts at San Francisco State College. In August Anatol Rapoport completed his year at the Center for the Advanced Study of Behavioral Sciences at Stanford, and left California to join the staff of the new Mental Health Research Institute at the University of Michigan. Jean Taylor, executive-secretary of ISGS since January 1950, resigned in September; Evelyn Rochetto, membership secretary since 1950, assumed the position of executive-secretary.

The result of these changes has been, as our members and subscribers know too well, that *ETC.*, which has almost never come out in accordance with its announced publication schedule but has usually been two or three or four months late, is now later then ever. Vol. XII, No. 2 (Winter 1955), which should have been out in December 1954, appeared in May; No. 3 (Spring 1955) appeared in July; No. 4 (Summer 1955—Transactional Psychology Issue) appeared early in December, which is almost six months late.

The year 1956 begins therefore with a resolution—the only New Year's Resolution the Editor remembers making—namely, to begin catching up with the announced schedule. If all goes well as this is being written (January 1956), readers will receive this issue in February—which will make it only five months late.

But the reader is entitled to take the resolution with a grain of salt. The following is a quotation from a letter from Anatol Rapoport to S.I.H., dated October 13, 1955: "The fall issue . . . will come out some time in February, I suppose—which puts us exactly on the same schedule we were just ten years ago when you and I were sitting in your office in Chapin Hall [Illinois Institute of Technology] and figuring how we were going to eliminate that five-month lag. . . . Do you suppose at that quarter-century anniversary banquet one of us will make a speech entitled, 'The Time *ETC.* Came Out on Time'?"

AN ELEVEN PAGE typescript, "God and the Semanticists," lies in *ETC.*'s editorial file awaiting identification. It is an extended reply to Stuart C. Dodd's article in the Autumn 1953 issue, "Three Semantic Exercises: 'Time,' 'Quality,' and 'God,'" and it was received by the Editors in October 1954. The author of this contribution neglected to put his name and address on his typescript; this information was probably supplied in an accompanying letter. But letters often get separated from the typescripts which they accompany, as appears to have happened in this instance. This note, then, is (1) to ask the author to identify himself, and (2) to remind all our contributors who might otherwise neglect this detail to put their names and addresses on their typescripts, and to enclose a self-addressed return envelope. Some contributors put their names on *each* page of their typescripts—and this is a wise safeguard, too.

THE ISGS ANNUAL ELECTION of directors held by mail ballot in June and July, 1955, resulted as follows: Elected to 3-year term (ending June 1958): Professor Kenneth Boulding, Department of Economics, University of Michigan; Dr. John R. Kirk, Chicago, Illinois; Professor Martin Maloney, School of Speech, Northwestern University; Mr. Lloyd Morain, San Francisco, California; Dean Russell F. W. Smith, Division of General Education, New York University. Elected for one year (to fill unexpired term of Dr. Irving Lee): Mr. Walter W. Millar, Pasadena, California. The new and re-elected directors chose their officers for 1955-56 by mail ballot also, with the following results: President, Russell F. W. Smith; Secretary-Treasurer, Martin Maloney.

MENTION OF THE ELECTION RESULTS is a reminder that some members have asked how candidates for election to the Board of Directors are selected. "Is there," some have asked, "a nominating committee, and if so, how is it chosen?" The answer is to be found in Article VII, Section 6, of the by-laws of ISGS: "The Board shall appoint a nominating committee to propose candidates for the Board. The Board shall appoint all officers of the corporation. The nominating committee shall place the name of any member on the ballot for the Board of Directors when requested to do so by the petition signed by any ten members filed with the secretary not later than April 15 in any year."

The right of nomination by petition has been little exercised in recent years, perhaps because this department has not often enough reminded members of this right. The terms of five directors will expire on June 30, 1956: David M. Burrell, Freeport, Illinois; Wendell Johnson, State University of Iowa; Ann Dix Meiers, New Jersey State Teachers College, Montclair, N.J.; Walter W. Millar, Pasadena, California; A. W. Pearson, M.D., Sherman Oaks, California. Members are urged to make known to the Board (*via* the ISGS business office) whom they wish to have placed on the 1956 ballot. Individual suggestions to the nominating committee will be welcomed, as well as formal nominations by petition.

PRESERVING DIGNITY. Washington, April 20 (UP)—"The Daughters of the American Revolution today shouted approval of a resolution demanding that United Nations 'interference' in United States affairs 'cease immediately and completely.' One delegate, Mrs. Roswell Tripp, of Washington, spoke against the resolution. . . . 'Let us observe before we condemn,' Mrs. Tripp said. She urged that the DAR send 'accredited observers' to the UN to see if rumors of 'concealed world federalist pressure' are true.

"Vigorous applause followed a reply by Mrs. Ernest W. Howard, of Clarence, Mo., who said sending an observer would 'undignify the great organization' of the DAR. 'Forget about observing,' Mrs. Howard advised. 'Let's go after them with clubs and what-have-you like our forefathers.' "

PRINCE PETR ALEXEYEVICH KROPOTKIN's famous book, *Mutual Aid: A Factor in Evolution,* long out-of-print, has recently been republished, with a foreword by Ashley Montagu, by the Extending Horizons Press, 11 Beacon St., Boston 8, Mass. (Cloth-bound, $3; paper-bound, $2.) Included in the volume is a reprinting of Thomas Henry Huxley's essay, "The Struggle for Existence," to which *Mutual Aid* was written as an extended reply. The book's main thesis is that mutual aid and co-operation are more successful and more fruitful factors in evolution than competition and strife.

Speaking of Kropotkin, we are reminded of a quotation from his *Memoirs of a Revolutionist* sent in by Mr. H. H. Marlin, of Bloomington, Indiana: "The Great Russian peasant perfectly well understands the educated man's talk, provided it is not

stuffed with words taken from foreign languages. What the peasant does not understand is abstract notions when they are not illustrated by concrete examples. But my experience is that when you speak to the Russian peasant plainly, and start from concrete facts—and the same is true in regard to village folk of all nationalities—there is no generalization from the whole world of science, social or natural, which cannot be conveyed to a man of average intelligence, if you yourself understand it concretely."

But who is not a "peasant" as regards other people's fields of specialization? Who is not bewildered by "abstract notions when they are not illustrated by concrete examples," especially in fields in which he has little training? Kropotkin's rules of discourse for the Russian peasant are good rules for those writing for an interdisciplinary journal like *ETC.*—indeed, good rules for any writer.

THE FOLLOWING EXCERPT is from a column by Sydney J. Harris in the Chicago *Daily News:* "My Great Books class recently spent two hours in trying to come to an agreement on what 'peace' actually is. At the beginning of the class, all the members were confident that they knew what the word meant—at the end, nobody was quite sure. Is peace merely the absence of armed conflict? If so, slavery would be peace. Is it the absence of 'physical' conflict? Then what about psychological warfare, which subjugates a people without firing a shot?

"Is it possible to have peace without justice? Without government? Without love? Without religion? Can nations which respect no common authority really have peace between them, or simply an uneasy truce? Is the jungle in a state of peace when animals are not fighting, or is it always in a state of potential warfare? . . ."

If this kind of verbalistic jousting is at all characteristic of the Great Books program, it is little wonder what refugees from the Great Books are turning up in adult classes in general semantics all over the country.

DR. KENNETH WINETROUT, of American International College, Springfield, Mass., as visiting professor at the University of Arkansas this past summer, gave a series of weekly discussions at Fayetteville on "The Language Problem," "The Process of Abstracting," "Devices and Techniques of General Semantics," and "General Semantics: An Approach to Communication." The discussions were attended by 40 to 45 persons each evening. "Members of the sociology and speech departments were the regular ones," Dr. Winetrout writes. "No one from English—I believe and fear."

THEY DON'T HAVE UNION CARDS. Atlantic City, N. J.—"A leading Roman Catholic educator criticized Albert Einstein and other leading scientists as being untrained to discuss philosophy and morals in the classroom. The Rev. Robert J. Henle, S.J., dean of the graduate school of St. Louis University . . . also described Henry Margenau, Yale physicist, and Percy Williams Bridgman of the Jefferson physical laboratory of Harvard as being untrained to teach such subjects as 'The Philosophy of Science.' Similarly, he said, men of the stature of Filmer S. C. Northrup, Sterling professor of philosophy and law at Yale, are not competent enough in the field of science to discuss it at length." Chicago *Sun-Times,* April 14, 1955.

"BEHAVIORAL SCIENCE," a new quarterly journal, official publication of the new Mental Health Research Institute at the University of Michigan, has been announced. It will contain articles on general theories of behavior and on empirical research specifically oriented toward such theories. An interdisciplinary approach to problems of behavior will be stressed. Although the scope of the journal will include all aspects

of behavior which can be subsumed under broadly general interdisciplinary theory, in the field of application special emphasis will be placed on contributions relating to research in mental health and disease.

The editorial board will include Franz Alexander (psychoanalysis), Alex Bavelas (social psychology), David Easton (political science), Ralph W. Gerard (neurophysiology), Donald G. Marquis (psychology), James G. Miller (psychology and psychiatry), Jacob Marschak (economics), Anatol Rapoport (mathematical biology), Ralph W. Tyler (education), and Raymond W. Waggoner (psychiatry). Subscriptions will be $6 a year. Manuscripts and subscriptions may be sent in care of Dr. James G. Miller, Mental Health Research Institute, University of Michigan, Ann Arbor, Michigan.

SECURITY RISK. "Christie was out of work for six months. The most serious charge against him was the government's contention that he was a psychoneurotic. It was later revealed that the government had misinterpreted 'neurodermatitis'—the medical term for 'jungle rot'—for a psychoneurotic condition, and had mistakenly listed Christie as too unstable to work. He returned to his job in November, 1954, after six months." *Newsday*, June 17, 1955.

NEW YORK CITY had many courses and lectures in general semantics this past autumn and winter. Robert P. Holston's evening course in general semantics at Columbia was continued for a third year. At the School of General Education of NYU, Russell F. W. Smith offered a full-term course entitled "Language, Meaning and Maturity." Harry Maynard gave a series of five lectures at Cooper Union. Gretta Baker was moderator of a series of discussions on mental health under the auspices of Columbia University Institute of Arts and Sciences on the topic, "Understanding our Emotions."

As 1956 begins, the program of the New York Society for General Semantics continues as vigorously as ever. On January 12, Gregory Mason, author and archeologist, spoke to the Society at the New York Academy of Sciences on the topic, "North of Tomorrow," based on his novel, *The Golden Archer* (Twayne Publishers, $3.50), a review copy of which has just been received by the Editors of *ETC*. Mario Pei, professor of Romance philology at Columbia University, will speak at the February meeting of the Society. Meanwhile, Dr. Robert Holston's course, "Applied General Semantics," is again announced as part of the Spring program of the School of General Studies of Columbia University.

A GROUP DYNAMICS film, "Our Invisible Committees," was shown at the October 28 meeting of the Chicago Chapter of ISGS through the kind offices of Professor Herbert Thelen of the University of Chicago. . . . Dr. Keith K. Hoover, director of student activities at Wright Junior College, spoke on the subject, "Can We Measure People's Contact with Reality?" at the November 25 meeting, held at the Commerce Club of Northwestern University's downtown campus. The meeting was attended by more than 100 people. . . . The Chicago Chapter's Annual Holiday Dinner was held on December 29 at the Chicago Art Institute. Dr. John R. Kirk spoke on "The Nature of Nonsense," and a film on semantics prepared by the late Dr. Irving J. Lee was shown.

"ON EXPRESSIVE LANGUAGE" is the title of collection of papers presented at the Clark University Conference on Expressive Language Behavior, published as a monograph by the Clark University Press (950 Main St., Worcester, Mass.; $1.25). The contents include "'Expressive Language' and the Expressive Function of Poetry," by Susanne Langer; "A Psychological Analysis of Expressive Language," by Heinz Werner; "Some

Psychological Methods for the Investigation of Expressive Language," by Bernard Kaplan; "On the Use of Metaphor in the Description of Persons," by Solomon Asch; "Expressive Aspects of Political Language," by Hans Sperber; "Some Aspects of Language in Schizophrenia," by Silvano Arieti. The collection was edited by Dr. Heinz Werner, an ISGS member since 1945.

ANSWERS TO DIFFICULT QUESTIONS. From the Chicago *Daily News*, April 27, 1955: "Despite the fact that the nation is enjoying one of the most prosperous eras in its history . . . a soup line forms each night at Warren and Union. Skid Row men, often numbering as high as 400, get in line for free soup and sandwiches. . . . Why do men line up like this in such good times? The answer is that Skid Row is Skid Row, good times or bad."

IN JANUARY 1956 the American Psychological Association will initiate publication of a new monthly journal entitled *Contemporary Psychology: A Journal of Reviews*. Edwin G. Boring of Harvard University has been named editor of the journal. A group of 26 consultants in the specialized fields of psychology will assist Dr. Boring. It is the aim of *Contemporary Psychology* to provide critical reviews of books in the broad field of psychology and related sciences. Specialized book reviews formerly appearing in the APA journals *Psychological Bulletin, Journal of Applied Psychology, Journal of Abnormal and Social Psychology,* and *Journal of Consulting Psychology* will be concentrated in the new journal. Subscriptions to *Contemporary Psychology* will be $8 a year. Correspondence regarding subscriptions should be addressed to American Psychological Association, 1333 Sixteenth Street, N.W., Washington 6, D. C. Correspondence with the editor should be sent to Dr. E. G. Boring, Memorial Hall, Harvard University, Cambridge 38, Mass.

READERS of *ETC.* write very few fan-letters to the Editors. You'd be suprised (or would you?) how few. Hence a letter such as the following, from a member of long standing, Mr. Otto Pauls of St. Louis, has been of immeasurable help in sustaining the morale of the Editors:

"Beyond a doubt you hit the top with the Autumn, 1954 issue. It's the best ever, in my estimation. . . . Salomon's idea of turning the Tower of Babel yarn bassackwards is nothing short of inspiration. The dialog between hodcarrier and bricklayer is rich and juicy. I chuckled, snorted, and split seams for two days after reading it. And the way he illuminates 'misunderstanding' and 'disagreement.' The whole piece gives me an urge to slop over with adjectives and superlatives.

"What a happy coincidence that the idea of standing things on their heads appears in the Shinar fable and also in the poem by Claude Coleman. . . . And Schneider's ability to put pages of text ino a single illustration is hard to beat. For me it is a very welcome variation.

"From the first day I became aware of general semantics, something kept whispering, 'Too late, too late. It begins on the college level and is not for the mass.' Futility and frustration. Now Eleanor McCann reviews the very book, seemingly, that brings general semantics to do spade-work in the high school. What could be more encouraging and more timely? . . . May your shadow grow longer and longer until we reach the happy day when the salt of general semantics will be in the bread of even grammar school youngsters."

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